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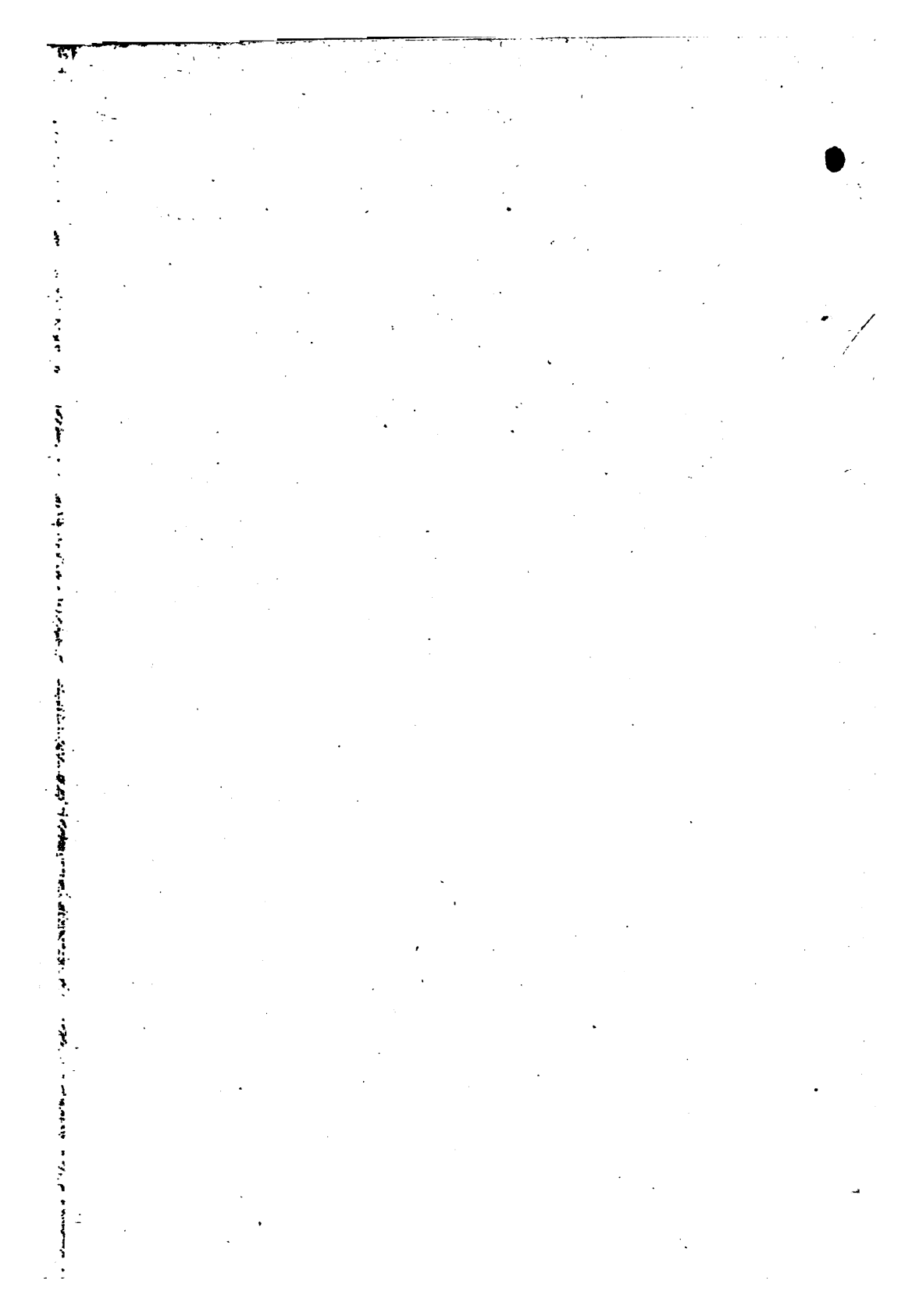


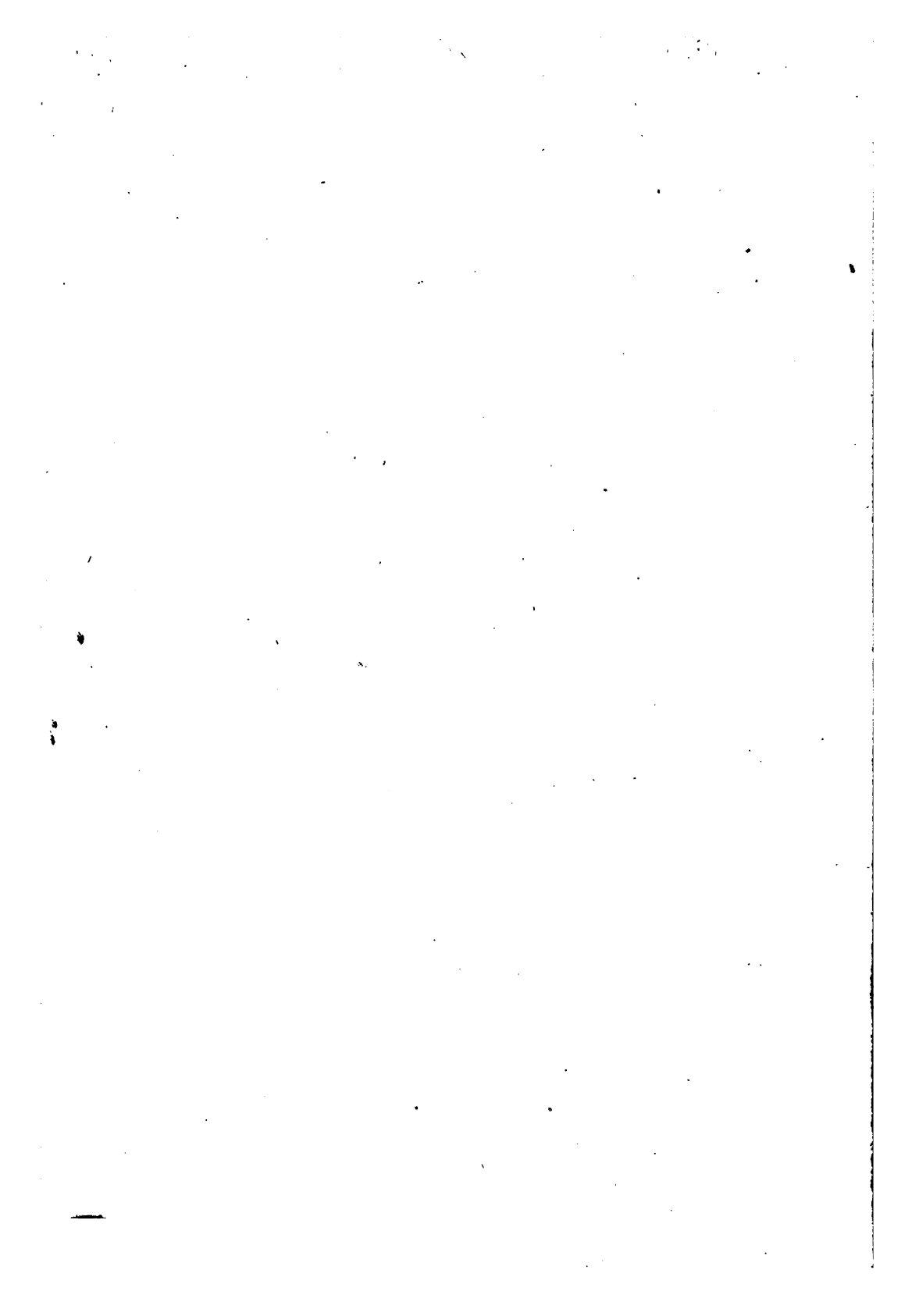
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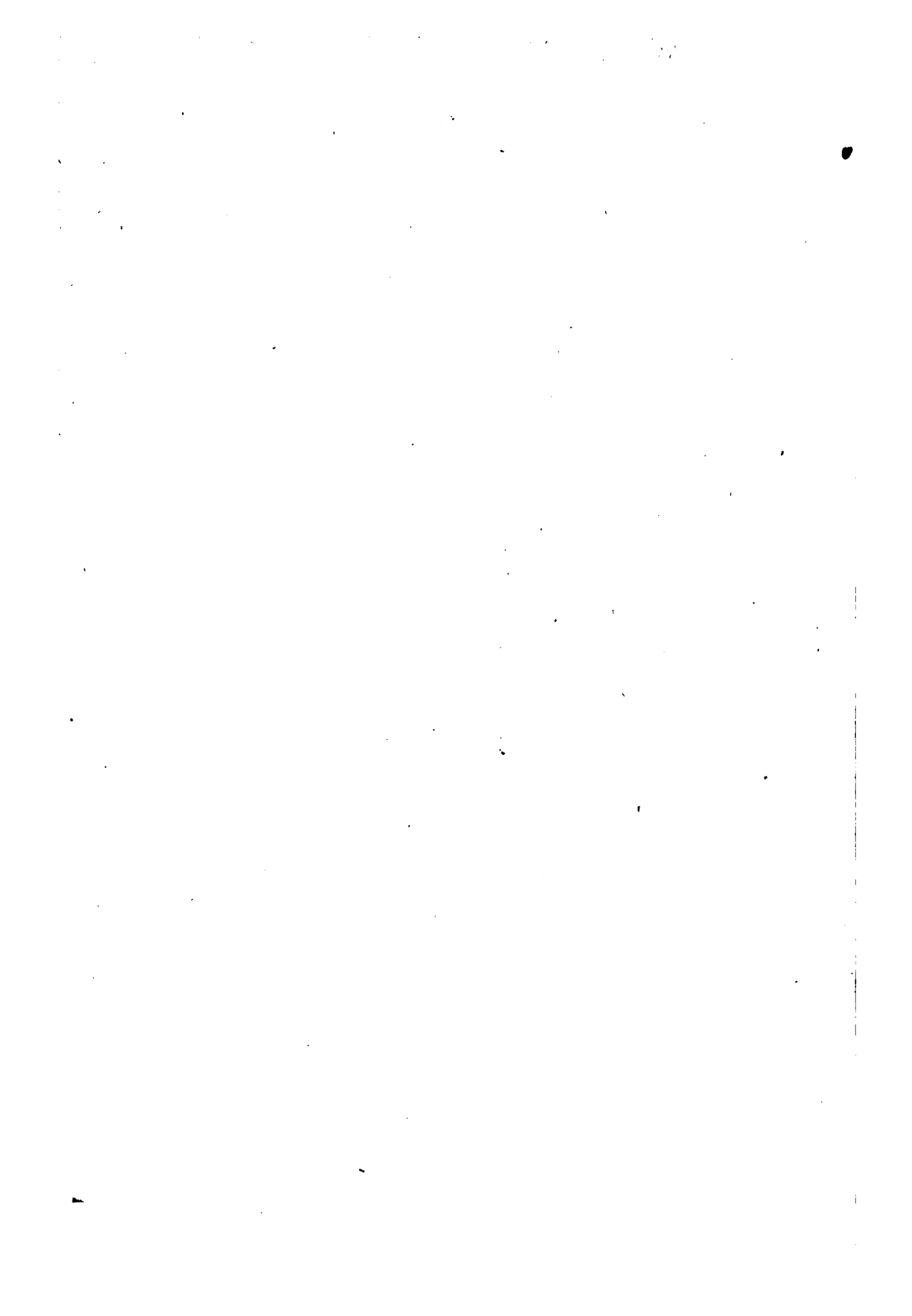
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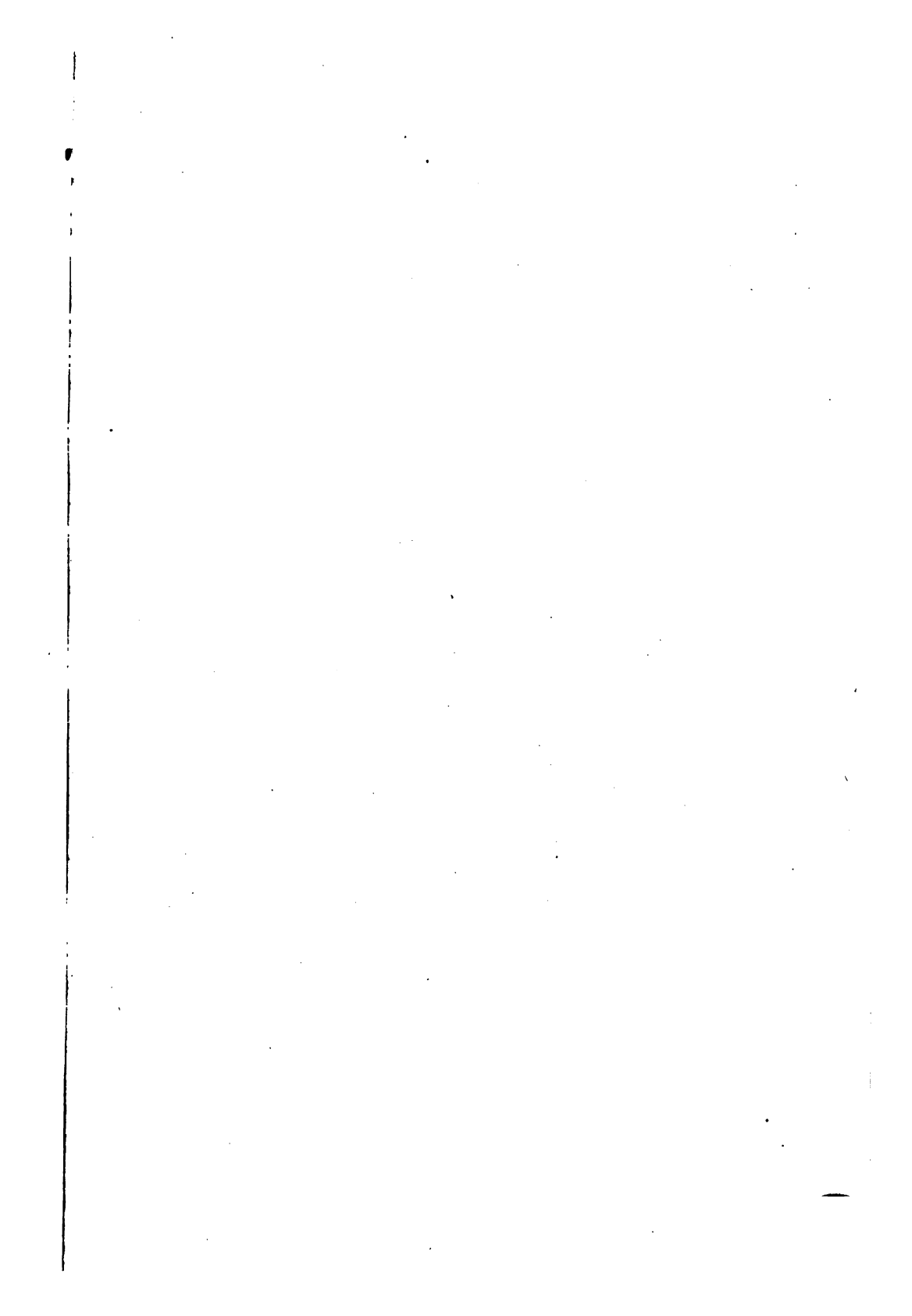
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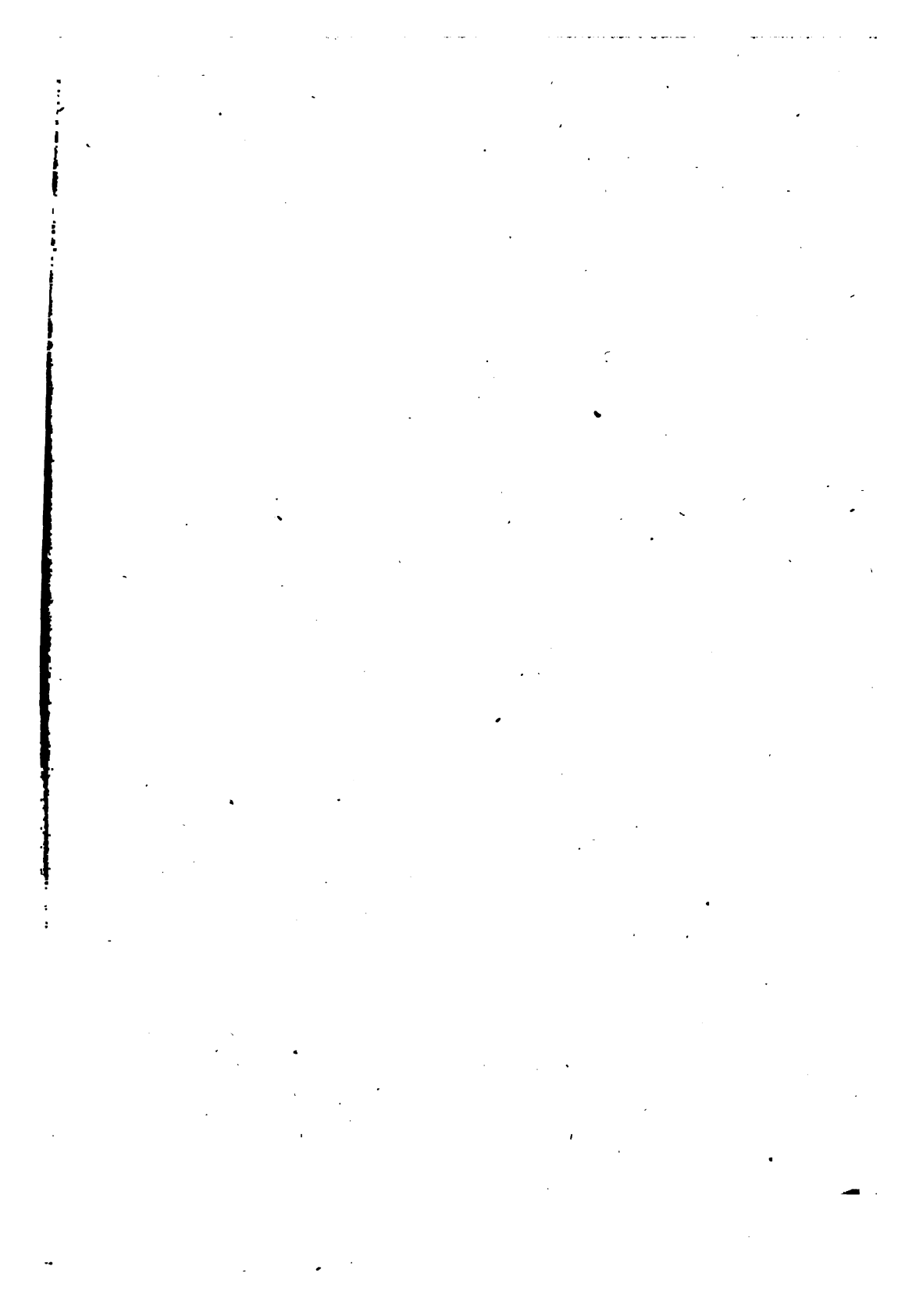
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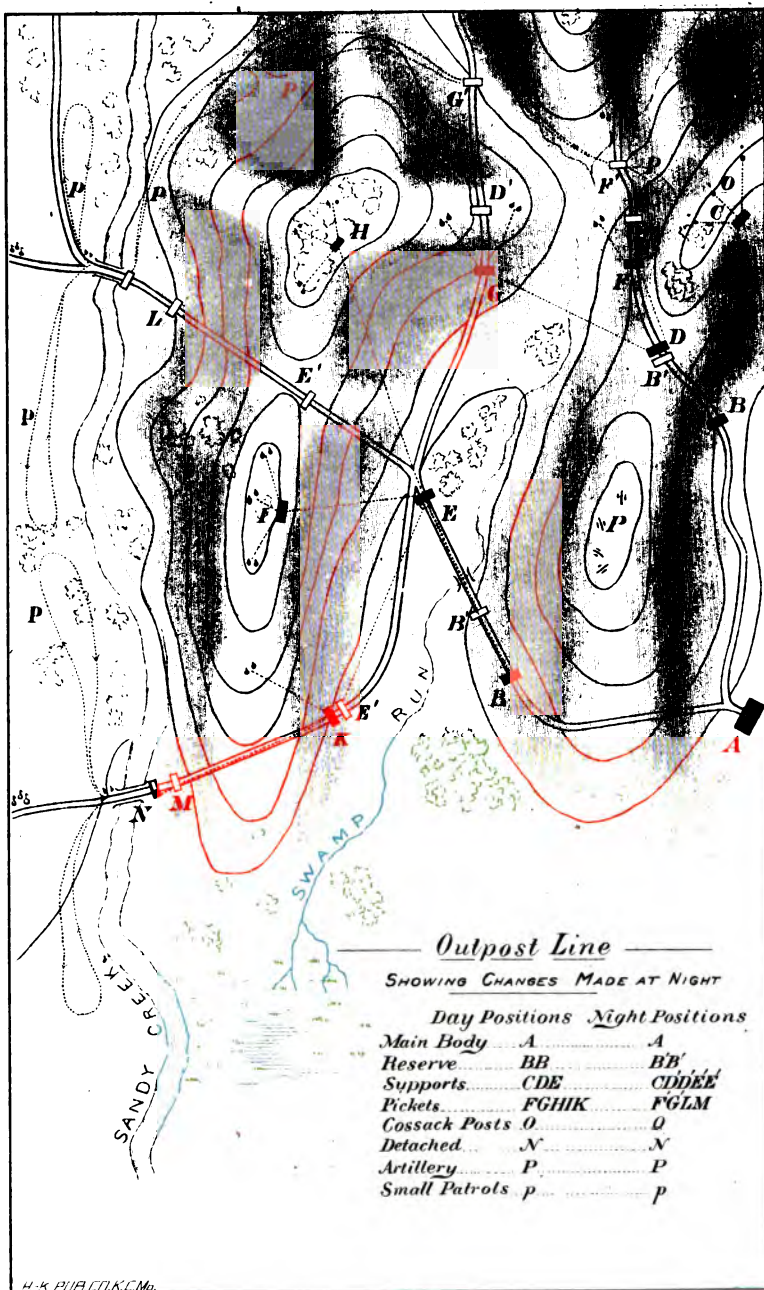
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THE SERVICE
OF
Security and Information

*John Nath Shawman.
Cambridge*

BY

ARTHUR L. WAGNER,

Captain, Sixth Regiment of Infantry, U. S. Army; Instructor in the
Art of War at the U. S. Infantry and Cavalry School; Gold
Medalist of the Military Service Institution of the
United States; author of "Organization
and Tactics," "The Campaign
of Königgrätz," etc.

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HEADQUARTERS OF THE ARMY,
ADJUTANT-GENERAL'S OFFICE,
Washington, June 7, 1893.

With the approval of the Secretary of War, the following is published for the information and guidance of the Army:

"The Service of Security and Information," by Captain Arthur L. Wagner, 6th Infantry, is announced as an authorized text-book, in connection with the system of examination to determine the fitness of officers for promotion, prescribed in General Orders, No. 80, of 1891, from this office.

* * * * *

BY COMMAND OF MAJOR-GENERAL SCHOFIELD:

R. WILLIAMS,
Adjutant-General.

OFFICIAL:

Assistant Adjutant-General.

PREFACE TO THE THIRD EDITION

The gratifying reception accorded to the first and second editions of "The Service of Security and Information" encourages the author to hope that the revised edition of the book now presented may not be unwelcome to the officers of the Regular Army and the National Guard.

Profiting by the kind criticism of his brother officers, and by his own experience in using the work for more than two years as a text-book at the U. S. Infantry and Cavalry School, the author has made a few changes in the text, which, it is believed, will meet with approval; but these changes are neither so many nor so great as to effect any radical alteration in the work.

The author desires here to express his thanks to Captain Eben Swift, Fifth Cavalry, First Lieutenant A. L. Mills, First Cavalry, and First Lieutenant J. T. Dickman, Third Cavalry, assistant instructors in Art of War at the U. S. Infantry and Cavalry School, for valued suggestions in the revision of the book.

U. S. Infantry and Cavalry School,

Fort Leavenworth, Kansas,

February 1, 1896.

PREFACE TO THE FIRST EDITION.

This book lays claim to no other merit than that of being an earnest attempt to meet the demand, often expressed, for an American text-book on the subjects herein discussed. Many of the features of the service of security and information are common to both hemispheres and to all armed forces, whether savage hordes or highly organized armies. Other details of the same science vary with the topography, the organization of the army, national characteristics, and the nature of the enemy encountered. It follows, therefore, that a text-book on this subject might be admirably adapted to the requirements of European officers and at the same time be in some respects quite unsuited to our needs.

English, French, and German military writers have written so voluminously on all tactical subjects, that the author has found a wealth of valuable books at hand for consultation; and he has discovered, on most of the important points, a gratifying unanimity of opinion on the part of writers of different nations. The aim of the author has been to select the best established theories of European tactical authorities, to illustrate them by a reference to events in our own military history, and to apply to them the touchstone of American practice in war. To this end he has submitted his manuscript to several officers of high rank and distinguished ability, who have criticised it in the light of their own extensive military study and great experience in actual warfare.

The author is at a loss for an adequate expression of thanks to Brigadier-General Thomas H. Ruger and Brigadier-General Wesley Merritt, U. S. A., for the valuable criticism, comments, and notes with which they have favored him, and by means of which he has been enabled to place upon his work the best stamp, as it were, of American experience in war. He desires also to express his obligations to Lieut.-Col. H. S. Hawkins, 23d Infantry, Lieut.-Col. Guy V. Henry, 7th Cavalry, Major H. C. Hasbrouck, 4th Artillery, Major C. C. Carr, 8th Cavalry, and Major J. B. Babcock, A. A. G., for valuable information and comments. To Lieut.-Col. Henry, Captain E. S. Godfrey, 7th Cavalry, and First Lieutenant Thomas Cruse, 6th Cavalry, the author is indebted for most of the information on which the chapter on "Indian Scouting" is based. To Colonel E. F. Townsend, 12th Infantry, Commandant of the U. S. Infantry and Cavalry School, in compliance with whose order this work has been written, and whose steady and consistent encouragement has accom-

panied it from its inception to its appearance in these pages, the author's thanks are especially due and are gratefully tendered.

A word in regard to the form in which this book makes its appearance may not be out of place. There is a fashion in books, as in all other human products; and the shape in which some of our most valuable military manuals have appeared would seem to indicate a tendency to sacrifice everything to the fancied benefits of portability; military books being printed in small type to reduce them to a proper compass to fit the pocket—in which, by the bye, they are never carried. It is not clear that this fashion has anything to recommend it; while anyone who has noticed the impaired eyesight of many of the graduates of our officers' schools must find much to condemn in a typographical style which seems designed mainly for the benefit of the oculist. It is hoped, therefore, that the typographical dress of this volume will prove a welcome innovation.

The plates with which this work is illustrated are, with a single exception, from drawings made by Lieutenant C. B. Hagadörn, 23d Infantry, whose skill and accuracy in such work are well known, and to whom the author desires to express his obligations.

A list of books consulted in the preparation of this work is given below. Where the author has felt under special obligations to any particular work, acknowledgment has been made in the text or in a foot-note. In many cases, however, the words of several authorities on the same subject are so similar that it seemed impossible to render tribute to any particular one. The author accordingly takes pleasure in expressing his obligations generally to all the works mentioned in the following list; more especially to De Brack, Rüstow, Von Mirus, Clery, Shaw, Wolseley, and the *Guide Manuel du Chef de Patrouille*.
Cumberland, Md., March 1, 1893.

LIST OF BOOKS CONSULTED IN THE PREPARATION OF THIS WORK.

Aperçus sur Quelques Détails de la Guerre, Bugeaud.
 Artillery Drill Regulations (U. S.).
 Art of War, Jomini.
 Avant Postes de Cavalerie Légère, De Brack.
 Battles and Leaders of the Civil War.
 Campaigns of Stuart's Cavalry, H. B. McClellan.
 Catechism of Military Training, Marryatt.
 Cavalry Field Duty, Von Mirus (tr. by Russell).
 Cavalry Drill Regulations (U. S.).
 Cavalry, Regulations for the Movements and Instruction of (British).
 Cavalry in Modern War, Trench.
 Conduct of a Contact Squadron, De Biensan (tr. by Bowdler-Bell).

Duties of the General Staff, Bronsart von Schellendorf.
 Dienstunterricht des Infanteristen, Von Waldersee.
 Elements of Modern Tactics, Shaw.
 Esprit des Institutions Militaires, Marmont.
 Extracts from an Infantry Captain's Journal, Von Arnim (tr. by East).
 Guide Manuel du Chef de Patrouille.
 History of the Crimean War, Hamley.
 History of the Peninsular War, Napier.
 History of the War with Mexico, Ripley.
 Infantry Drill Regulations (U. S.).
 Infantry Fire Tactics, Mayne.
 Instruction for Cavalry, Von Schmidt.
 Johnston's Narrative.
 Journal of the Military Service Institution of the U. S., various
 volumes.
 La Petite Guerre, Rüstow (tr. by Savin de Larclause).
 Letters on Cavalry, Prince Kraft zu Hohenlohe Ingelfingen.
 Life of Andrew Jackson, Parton.
 Méthodes de Guerre Actuelles, Pierron.
 Minor Tactics, Cléry.
 Maximes de Guerre, Napoleon.
 Memoirs of U. S. Grant.
 Memoirs of W. T. Sherman.
 Memoirs of P. H. Sheridan.
 Napoleon's Expedition to Russia, Ségur.
 Official Records of the War of the Rebellion.
 Operations of War, Hamley.
 Précis of Modern Tactics, Home.
 Règlement sur le Service des Armées en Campagne, De Savoye.
 Service d'Exploration et de Surêté, Bonie.
 Soldiers' Pocket Book, Wolseley.
 Strategic Service of Cavalry, Bowdler-Bell.
 Strategischer Kavalleriedienst, Von Widdern.
 Strategy and Grand Tactics, Dufour.
 Studies in Troop Leading, Verdy du Vernois.
 Tactical Deductions from the War of 1870-71, Boguslawski.
 Tactique de Périzonius.
 Tactique des Renseignements, Lewal.
 The Army in the Civil War ("Scribner Series").
 The Franco-German War, Borbstaedt (tr. by Dwyer).
 The Franco-German War, Von Moltke (tr. by Bell and Fischer).
 The Nation in Arms, Von der Goltz.
 War, Clausewitz.
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PRELIMINARY DEFINITIONS.

- Abatis*—Rows of felled trees, with the smaller branches lopped off, and the others sharpened and turned towards the enemy.
- Base*—"A base of operations is the portion of country from which the army obtains its reinforcements and resources, from which it starts when it takes the offensive, to which it retreats when necessary, and by which it is supported when it takes position to cover the country defensively. The base of operations is most generally that of supply—though not necessarily so, at least as far as food is concerned."—*Jomini*.
- Billet*—Quarters provided for troops in private houses, barns, etc. Soldiers billeted generally obtain from the inhabitants food and drink for themselves and forage for their horses; payment for these supplies being usually made at the rates and in the manner prescribed in regulations and orders.
- Bivouac*—A temporary place of repose for troops, in which they are sheltered by shelter-tents, bowers, or improvised shelter of any kind, or sleep in the open air. A camp differs from a bivouac, in that the men are sheltered with regular tents. Troops are cantoned when sheltered in huts or billeted in villages.
- Communications*—The routes (roads, railroads, etc.) by which an army communicates with its base, or by which the several parts of an army communicate with each other.
- Compliments*—Ceremonious marks of respect paid by officers and soldiers to their military superiors; such as saluting, standing at attention, etc.
- Containing Force*—A body of troops charged with the duty of holding in check a body (generally numerically superior) of the enemy, while the main efforts of the army are directed against another portion of the hostile force.
- Depth*—The space occupied by a body of troops from front to rear.
- Distance*—The space between bodies of troops, or individual soldiers, from front to rear.
- Escort Wagon*—A four-horse wagon, lighter than the "army wagon."
- Front*—The extent of ground occupied by the front rank of a body of troops in any formation.
- Glacis*—A mound of earth, with a gentle slope to the front, thrown up a few yards in front of the ditch of a fortification.
- Impedimenta*—Baggage, and, in general, anything accompanying troops, which tends to impede the celerity of their movement.
- Interval*—The lateral space between bodies of troops or individual soldiers.

Morale—The condition of troops as to discipline, bravery, confidence, or discouragement, etc.

Provost-Guard—A guard under the orders of a provost-marshal.

Provost-Marshal—An officer attached to the headquarters of the commanding general to superintend the police of the army; to provide for the protection of the inhabitants of the country from pillage and violence; to preserve order among camp-followers; to take charge of stragglers, prisoners, and deserters; and to superintend the secret service.

Shrapnel—Called the "man-killing projectile." A shell filled with bullets, and having a bursting charge only sufficient to break the case and release the bullets, which then move forward with the velocity which the projectile had at the moment of bursting.

Strategy—The art of moving an army in the theater of operations with a view to placing it in such a position relative to the enemy as to increase the probability of victory, increase the consequences of victory, or lessen the consequences of defeat.

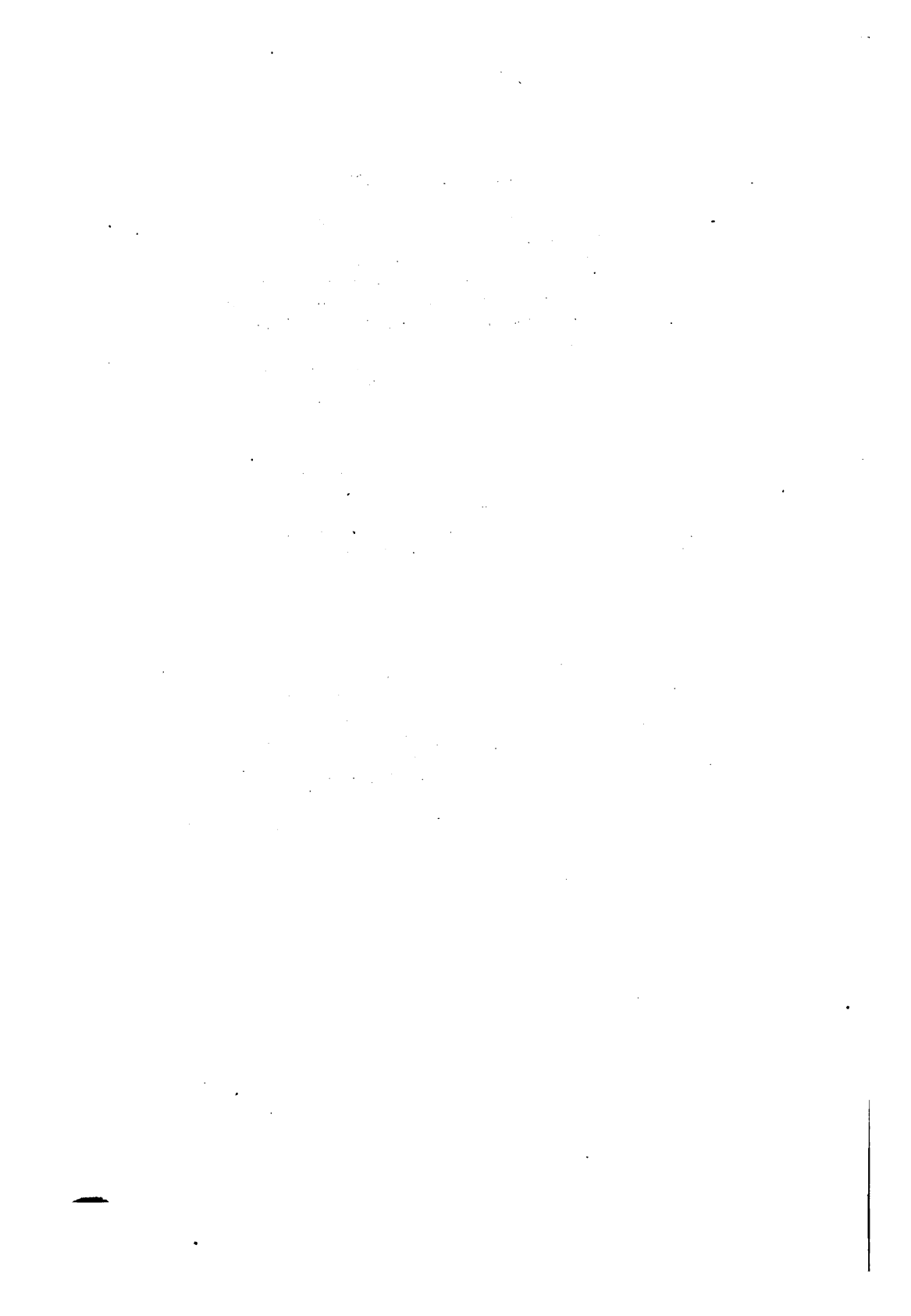
Tactics—The art of handling troops on the field of battle.

Terrain—The topography of a field, considered especially in its relation to tactical operations.

Theater of War—"The theater of war comprises all the territory upon which the parties may assail each other, whether it belong to themselves, their allies, or to weaker states who may be drawn into the war through fear or interest. When the war is also maritime, the theater may embrace both hemispheres. * * * The theater of war may thus be undefined, and must not be confounded with the theater of operations of one or the other army."—*Jomini*.

Theater of Operations—"The theater of operations of an army embraces all the territory it may desire to invade, and all that it may be necessary to defend."—*Ibid*.

Vedette—A mounted sentinel.



CHAPTER I.

INTRODUCTION.

It is pardonable to be defeated, but never to be taken by surprise.—*Frederick the Great.*

If opposing armies could march unmolested to a designated battle-field, as the knights of old repaired to their tournaments, the military problem would consist simply in drawing up the forces in order of battle, and nine-tenths of the difficulties of the art of war would be eliminated. But just as the code of ethics which governs the actions of individuals is varied greatly when applied to the diplomacy of nations, so the chivalry and punctilio of private combat are necessarily lacking in the operations of war. It is the duty of a commander to assail the enemy under circumstances most unfavorable to the latter and most advantageous to himself; to catch the hostile army astride of an unfordable stream, or divided by an impassable obstacle of any sort; to assail the communications of his opponent while covering his own; to surprise him, and, in brief, to take advantage of the unfortunate position or unskillful dispositions of the foe, and to guard against being similarly assailed himself.

An army taken by surprise may be compared to a sleeping man attacked by a well-prepared enemy. Astonishment, confusion, and alarm are opposed to coolness, preparation, and confidence; and severe blows are received before any can be given in return. The surprised army must possess many elements of superiority over its assailant to be able to over-

come the enormous disadvantage at which it is taken; and a surprise generally means a defeat.

If the entire army were constantly on the alert, its surprise would be impossible: so, too, if the plans and movements of the enemy were accurately known by the commander, surprise could easily be avoided. But to keep the entire force continually on the watch would be to ruin it by physical hardship; and a knowledge of the enemy's movements and objects is generally incomplete and usually inferential. To guard against surprise without making undue demands upon the endurance of the soldiers, use is made of covering detachments, which should be strong enough to hold the enemy while the main body is preparing for action. On the march the security of the army is thus provided for by advance guards, rear guards, and flanking detachments: at a halt a chain of outposts protects it from surprise.

Information in regard to the enemy is the indispensable basis of all military plans, and nothing but faulty dispositions for the security of an army can be expected if such information is lacking. Moreover, the covering detachments, being nearer the enemy than the main body is, are charged either with gaining this information, or with the support of patrols or detachments engaged in scouting and observation. In military science the two elements of security and information are, therefore, inseparable.

The information necessary for a commander is of two kinds:

1. That relating to the geography, topography, and resources of the theater of operations.
2. That which relates to the strength and composition of the enemy's forces, and their position, movements, and morale.

Among military nations, the first kind of information

is now generally obtained in time of peace, and compiled by a bureau of military intelligence at the headquarters of the army. This has not, however, always been the case. When the Crimea was selected by the Allies, in 1854, as a theater of operations, it was practically a *terra incognita*. Hamley says:

"It was as completely an unknown country to the chiefs of the allied armies as it had been to Jason and his argonauts when they journeyed thither in search of the Golden Fleece. It was known to contain a great harbor, and a city with docks, fortifications, and arsenal; but the strength and resources of the enemy who would oppose us, the nature of the fortifications, and even the topography, except what the map could imperfectly show, lay much in the region of speculation."*

Our own military history offers, if possible, still more striking instances. Such was the lack of information concerning Mexico, that our war with that country lasted a year before definite plans of campaign were adopted. Taylor's movement upon Monterey was avowedly for the purpose of obtaining information respecting the capacity of the country to sustain a force of 6,000 men or more; and Wool's expedition against Chihuahua, undertaken upon insufficient information, terminated fruitlessly at Monclova, more than three hundred miles from its objective.

In the War of Secession much of the theater of war had never been accurately mapped, and in many instances the topography of the immediate theater could be learned only by reconnaissances conducted during the military operations. In his testimony before the Committee on the Conduct of the War, General McClellan said: "Our maps proved entirely inaccurate, and did us more harm than good, for we were constantly misled by them." In his report he states: "The

*"The War in the Crimea," page 24.

country, though known in its general features, we found to be inaccurately described in essential particulars in the only maps and geographical memoirs or papers to which access could be had. Erroneous courses of streams and roads were frequently given, and no dependence could be placed on the information thus derived. Reconnaissances, frequently under fire, proved the only trustworthy sources of information." Delays and embarrassments were caused by incorrect maps and faulty topographical information in Grant's Virginia campaign also.*

Such instances will be more rare in future, and a nation contemplating the invasion of another country will generally possess beforehand an accurate knowledge of its geography, topography, and resources. But in the invasion of any Central American or South American country, we should, probably, labor under the same disadvantages, in this respect, that were encountered during the War of Secession; and topographical reconnaissance becomes thus a matter of much importance to American officers. This subject belongs, however, to military topography rather than to tactics, and is exhaustively treated in several well-known works.†

The second class of information is gained in two ways:

1. From spies, deserters, prisoners, newspapers, etc.
2. By reconnaissance.

The first method does not pertain to the subject of tactics. All the information gained in this manner is collated at the headquarters of the army, to which *all* information in regard to the enemy should be sent without delay.‡

* See Humphreys' "The Virginia Campaign of '64 and '65," pages 128 and 211; also "Personal Memoirs of U. S. Grant," Vol. II., page 243.

† The student is referred to Root's "Military Topography," and to Chapter VII., Vol. I., and Chapter VIII., Vol. II., of Bronsart von Schellendorf's "The Duties of the General Staff" (Hare's translation).

‡ Further on this subject, see Chapter VII.

In the subject of tactics we have, then, to deal solely with military reconnaissance, in contradistinction to topographical reconnaissance. A reconnaissance may be effected by forces varying in size from a single scout to an entire division; and the reconnoitering force may consist of infantry or cavalry, of both, of all three arms, or of cavalry and horse artillery.

To gain reliable information of the enemy, contact with him should be quickly gained and never lost. On the march bodies of cavalry, pushed out in advance, come in touch with the advanced parties of the enemy, which they endeavor to drive in or brush aside, at the same time covering their own army with a veil which the enemy must be prevented from penetrating. If the army is at a halt, and the enemy is advancing, similar reconnoitering bodies are pushed out to meet him while he is still at a distance.

Reconnaissance is thus primarily performed by a screen of cavalry extended well to the front of the main body. It is also conducted by bodies of troops sent out from the main body or its advanced detachments or posts. The question of reconnaissance is inseparable from each of the subjects considered in the following chapters.

CHAPTER II.

THE ADVANCE GUARD.

Marches in the vicinity of the enemy can not be made with too much precaution and prudence.—*Marmont*.

Troops moving in one body would, if they came suddenly upon the enemy, certainly be thrown into confusion, and perhaps defeated, before deployment for action could be effected. Moreover, insignificant bodies of the enemy could seriously delay the march of the column by causing it to halt and deploy for action.

A column of troops on the march is, therefore, divided into a *main body*, an *advance guard*, a *rear guard*, and such *flanking parties* as may be necessary.

The objects of the advance guard are, in general terms, to observe and to resist; specifically, they are:

1. To provide for the security of the main body by giving it time for deployment when the enemy is encountered.
 2. To clear the way for the main body and prevent its march from being delayed.
 3. To seize and hold important points until the arrival of the main body.
 4. To support the reconnoitering cavalry, and afford a rallying point for it in case it is driven in by the enemy. Even when a cavalry screen is operating in front of the advance guard, the latter should not relax its vigilance. The cavalry may be driven in, and the advance guard must then check the enemy. On advance the security of the column must, therefore, depend essentially upon the advance guard.
- Strength*.—The proportionate strength of the advance

guard varies with the size of the main body, the object of the march, the topography of the country, and the nature of the enemy. In a close, rugged country, and against an enemy inferior in numbers and morale, it should be less than in an open country, against a strong, aggressive enemy, or when the intention is to bring on a decisive engagement. With a large force the proportionate strength of the advance guard is larger than in the case of a small column. No absolute rule for the strength of the advance guard can be given. If too weak, it can not fulfill its proper functions; if too strong, there will be a hurtful waste of energy, for service with the advance guard is much more fatiguing and exhausting than marching with the main column. Moreover, a strong advance guard has a tendency to engage an enemy seriously, even when its duty requires that it should merely fight a delaying action to gain time for the main body.

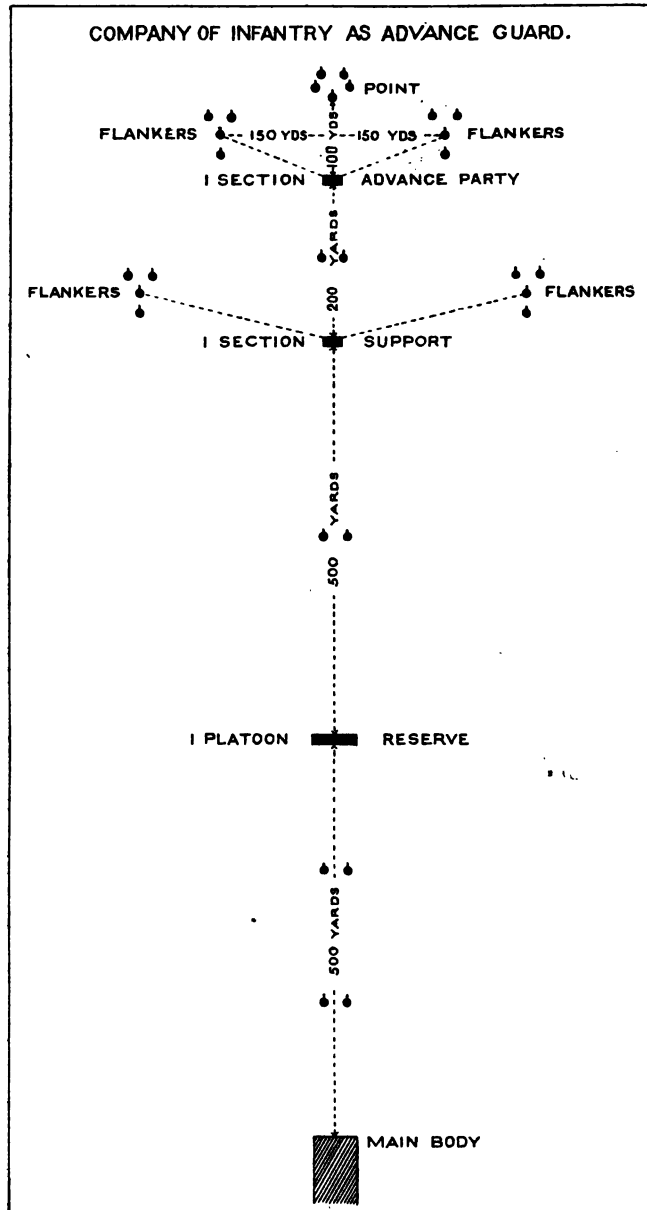
As a general rule (subject, however, to a multitude of exceptions), we may assume the strength of the advance guard to be one-sixth of the whole force, and the rear guard to be half as strong as the advance guard. On a retrograde movement the relative strength of the advance and rear guards would be reversed. The flanking parties are taken from the advance and rear guards, except in the case of very large forces, when they would be separate bodies of a strength according to circumstances. Thus we have about a fourth of the whole force on duty with the covering detachments on the march.

With a small force the advance guard might be reduced to one-eighth, or even one-tenth, of the whole. The time required for the deployment of a large column (such, for instance, as an army corps) being much greater than in the case of a small force, the delaying action of the advance guard must be much longer, and its strength much greater.

In the Franco-German war the German columns sometimes pushed forward half of their force as advance guard, and never less than one-fourth. But this proportion can not be recommended; for no advantage worth considering seems to have been gained by these great advance guards, while they frequently brought on battles, as at Spicheren, Wörth, and Colombey, contrary to the wishes and plans of the commanding general. In view of this tendency of large advance guards to commit themselves to serious engagement, Von der Goltz says: "The advance guard must be only small. It was formerly the rule to employ a third or fourth part of all the troops on this duty. The justification of this proportion appears very doubtful. The commander-in-chief parts with a considerable portion of his own troops, and creates an independent will beside his own." A large advance guard, by engaging seriously, is likely to defeat the object for which it is created; for instead of gaining time for the main body to deploy, it hurries it into action. Von der Goltz adds: "The experience of the late wars has taught us that the main body never, as a rule, deployed, because the urgently needed assistance required by the advance guard when struggling with a superior enemy demanded that the troops should be led by dribblets straight into the battle." It seems, therefore, that, even in the case of large forces, the advance guard should not have so great a proportionate strength as the Germans gave it, and that it should be so composed as to admit of its withdrawal from action, if desirable, without precipitating a battle.

Formation.—An advance guard consists of a series of detachments increasing progressively in size from front to rear, each being charged with the duty of protecting from surprise the body immediately following it and gaining time for the latter to prepare for action.

PLATE I



The advance guard is divided into two parts: the *reserve* and the *vanguard*. The reserve consists of from one-third to one-half of the entire advance guard. The remainder constitutes the vanguard, which is divided into the *advance party* and the *support*, the latter being generally twice as strong as the former. In large advance guards this proportion is often different; the support, relatively to the advance party, and the reserve, relatively to the vanguard, being considerably greater. These proportions are, moreover, varied according to the most convenient subdivisions of the organizations composing the advance guard. They may be regarded as suitable in most cases.

The following is given as a typical (but by no means invariable) formation of a company forming the advance guard of a battalion. (See Plate I.)

The advance party (one section) throws forward a "point" consisting of three or four men under a non-commissioned officer. On each side a flanking group of four men marches about 150 yards from the main route to the right and left rear respectively of the point. Each flanking group should be under a corporal or old soldier, and would habitually march with two men in front and one in rear of the group leader, though the formation adopted would depend upon circumstances.* The rest of the advance party follows 100 yards in rear of the point.

The support (one section) follows the advance party at a distance of 200 yards, throwing out two flanking groups of four men each to its right and left front, and somewhat farther out than the flankers of the advance party. These groups can safely move farther out than those of the advance party, thus extending the field of view; while each can, if necessary, protect by its fire the outer flank of the group in front.

*See chapter on Reconnaissance.

All flanking groups should be relieved every hour, if practicable, as their duty is much more fatiguing than that of the men marching on the main route. A connecting file, detached from the advance party, marches between the advance party and the support to aid in the transmission of intelligence from one to the other. On many roads bicycles can be advantageously used by the connecting files.

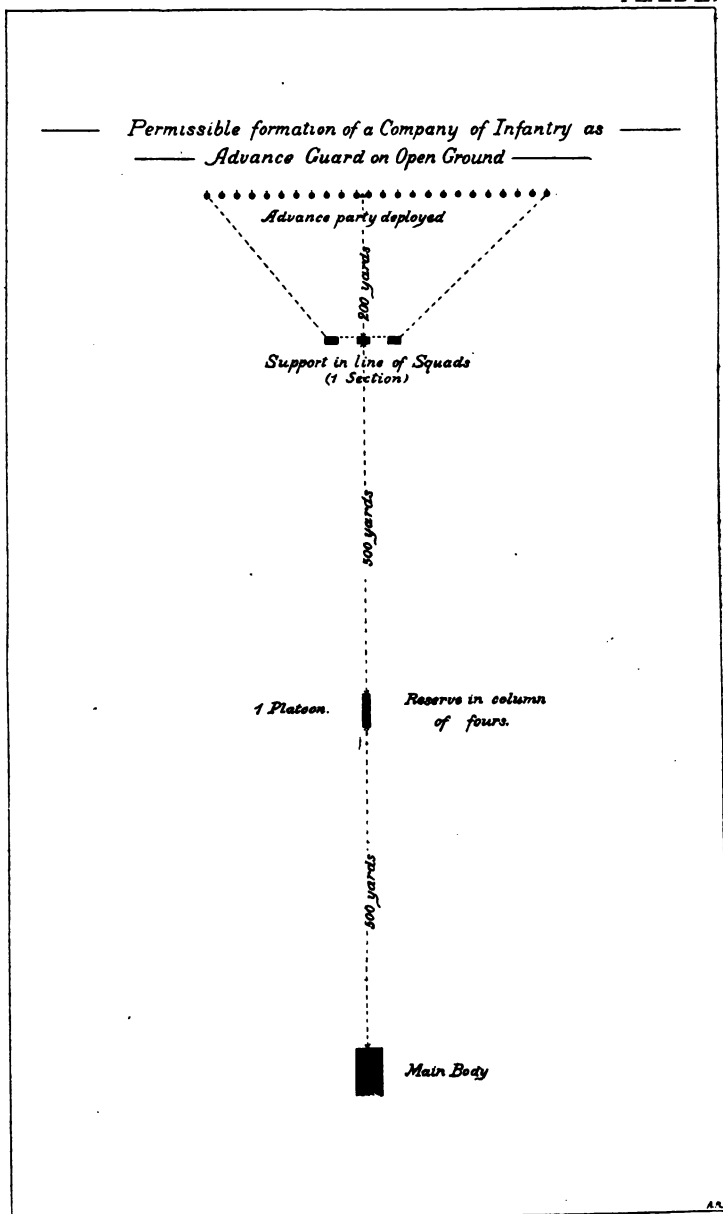
The reserve marches about 500 yards in rear of the support, a connecting file marching between them. The reserve may throw flanking groups to the front or to the front and rear, the groups being slightly farther out than those of the support. The flankers from the reserve can generally be dispensed with, and should be thrown out only when reasonable prudence requires them; for, as a rule, the reserve should be kept entire and well in hand.

The main body follows the reserve at 500 yards, one or two connecting files marching between the two bodies.

The distances given above are all variable; but those from the support to the reserve, and from the reserve to the main body, can not prudently be made more than 600 or 800 yards, respectively, in the case of so small a force as the one considered. In the case of a single company acting as an advance guard, the rule for the proportionate strength of the advance party and the support is necessarily modified to accord with the most convenient subdivisions of the company.

If the nature of the country is such as to render the use of flanking groups impracticable, both the advance party and the support move forward entire, with the exception that the advance party is always preceded by a point.

When marching in an open country, the entire advance party may be deployed as skirmishers, with considerable intervals, the support following in line of squads. Both lines may be straight or echeloned back slightly from the center



toward the flanks. The reserve should ordinarily be kept in column. (See Plate II.)

When the advance guard consists of a battalion, the first and second companies constitute the vanguard, and the third and fourth the reserve. In this case, the first platoon of the first company constitutes the advance party, the support consisting of a company and a half. The distances may be as follows: From point to advance party, 150 yards; from advance party to support, 200 yards; from support to reserve, 600 yards; from reserve to main body, 800 yards. (See Plate III.) In the case of two battalions acting as the advance guard of a brigade, the vanguard and reserve would each consist of a battalion, the advance party consisting of a company, and the support of three companies. The distances would be about the same as in the case of a single battalion.

Distance from Main Body.—The distance from the advance guard to the main body depends so entirely upon circumstances that it can not be made subject to any rigid rule. If the distance were too great, the advance guard might be forced into a heavy engagement while beyond the assistance of the main body, and might even be entirely cut off by an attack upon its flank and rear. If, on the other hand, the distance were not great enough, time could not be afforded for the preparation of the main body for action.

The advance guard should be far enough ahead to enable the commander of the column to make his plan of action without extreme haste while the advance guard is still successfully resisting the enemy; but it should not be so far in advance that the commander of the main body should be obliged to abandon every other consideration to the one object of hurrying to the succor of the advance guard.

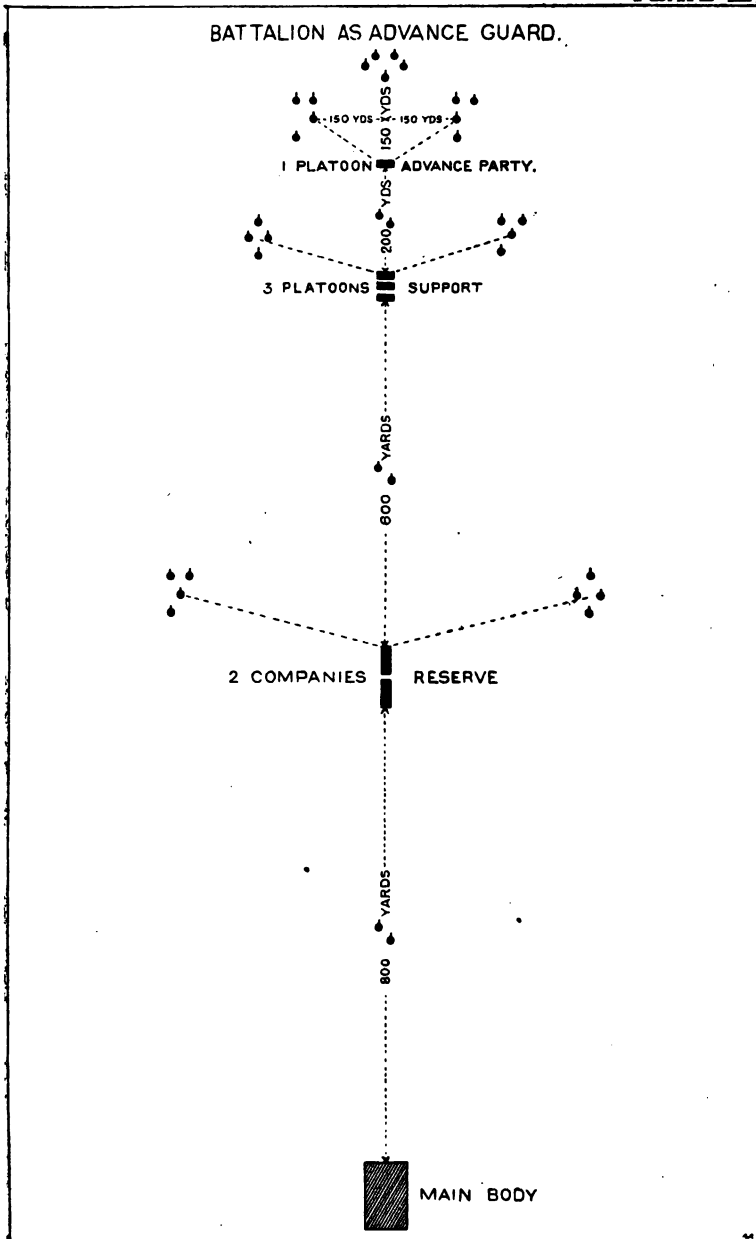
A rough rule, which will answer in many cases, is that the *minimum* distance should be equal to the depth of the

main body; as the time required for the rear troops to deploy on the head of the column would not be greater than that taken by the advance guard in falling back.

It is evident that this rule will not answer when a large force is acting with energy and aggressiveness for the purpose of bringing on a battle, as the advance guard must then be promptly supported. At Mars-la-Tour, when the German army was moving forward with the object of stopping Bazaine's retreat and bringing him to battle, the advance guard of Stülpnagel's division, being separated by a considerable distance from the main body, was so roughly handled by the enemy that the leading battalion of the main body had to be hurried into action without deployment, and the escape of the division from disastrous defeat was due only to the failure on the part of the French to take advantage of the opportunity presented.

The distance will also depend upon the nature of the country and the state of the weather. If the country is full of defensive positions, such as to admit of a sturdy delaying action on the part of the advance guard, the distance may be decreased. In foggy weather, or at night, or during a storm of rain or snow, the distance should be decreased, as well as the front covered by the scouting groups or flanking parties. If, on the other hand, the country is open, the weather clear, and there is danger of the advance guard being driven back, the distance must be increased.

It will be observed that, in the typical formations given above, the main body is from 1,300 to 1,750 yards from the point, while the reserve is from 800 to 950 yards from the point. Even if the enemy were so well concealed, and the advance guard so careless, that the point should be in actual contact with the enemy before opening fire, the reserve would be at least 800 yards from the hostile force. In almost



every conceivable case, the first shots fired by the point or flankers of the advance party would be at such a range that (with the distances given above) the reserve could prepare for action before coming under destructive fire. The reserve is the first body that really demands time for deployment. It is essentially the *fighting* part of the advance guard; the vanguard is the *reconnoitering* part.

The Commander of the Vanguard.—The vanguard should always be commanded by an officer, who should be mounted, if possible, and furnished with a detailed map of the region through which the force is marching. He habitually marches with the support, but goes to any part of the vanguard where his presence may be necessary. He may take immediate command of the advance party, if it seems advisable to do so, leaving the support under the immediate command of the officer or non-commissioned officer next in rank. If guides are present, they should accompany the support and be under the orders of the commander of the vanguard.

It is the duty of the commander of the vanguard:

1. To see that the proper road is taken by the point.
2. When cross-roads are passed, to see that a man is left to guide the main column.
3. To send out special patrols to examine all ground that might afford shelter to the enemy, such as woods, farm-houses, hamlets, etc.
4. To send out special patrols to watch and oppose any hostile patrols that may be seen, or whose presence may be suspected.
5. To cause necessary repairs to be made in roads, bridges, approaches to fords, etc.
6. To transmit promptly to the commanding officer of the advance guard all information that he may gain about the enemy, first testing its accuracy as far as possible with-

out delaying the transmission of important news to the commander.

7. To see that the march of the column is not, under any circumstances, unnecessarily delayed.

The support replaces any men of the advance party who may be relieved or placed *hors de combat*. When a scout of the advance party brings in important information, he should, if practicable, be sent to the commander of the advance guard. His place with the advance party is at once supplied from the support. He is retained with the reserve, from which another man is sent forward to the support. The number of men with the point and flankers should, if possible, remain unchanged. When there are particular reasons for sending the man back to his former post, the man who replaced him should be returned.

Staff Officer.—In a command of considerable size a staff officer usually accompanies the vanguard, and is charged with the duty of selecting a camp or bivouac for the main body. When he has selected the place, he remains there with such a detail as may be necessary, until the arrival of the main body, the advance guard marching on and forming the outpost, at least temporarily.

The Commander of the Advance Guard.—The commander of the advance guard is generally with the reserve; but, on approaching the enemy, should go wherever his presence is most needed. He should always be mounted, if practicable, even in the case of a small advance guard. With the exception, perhaps, of the commander of the rear guard in retreat, no officer needs a more perfect combination of courage, self-reliance, and good judgment.

A timid officer in command of an advance guard would suffer the column to be delayed by small parties of the enemy; a rash one would plunge into combat, and might thus

impose upon his superior a course of action at total variance with his plans. Small parties of the enemy should always be quickly driven back. On the other hand, an engagement should generally be avoided, unless the commander of the advance guard has orders to touch upon the enemy and bring him to a stand at all hazards.

The commander of the advance guard should continually consider the measures necessary for the security of the march, and for rapidly gaining reliable information of the enemy. He should carefully observe the ground, and consider the tactical use that might be made of it, and should have a clear idea as to what he intends to do in case the enemy is encountered. His orders will be either to march in a certain direction and arrive promptly at a certain point, to pursue the enemy vigorously, or to follow him with prudence, and profit by his faults and by all advantages that offer themselves. In the first two cases he should execute his orders promptly and exactly. In the last case he should move cautiously, venturing upon any particular route only after having well weighed the probable results of his decision.

Halts.—Whenever the advance guard halts, all approaches should be reconnoitered and guarded, and an officer should be sent to get an extended view from the highest available point. During a short halt each part of the advance guard remains in the place where it is halted. The reserve may usually be allowed to fall out; but the support and the advance party rest or stand at ease, according to the proximity of the enemy and the consequent necessity of alertness. If a prolonged halt is contemplated, the advance guard endeavors first to occupy ground that will furnish a good defensive position, behind which the main body is assembled in the best formation for prompt deployment.

Signals.—Information from one part of the advance

guard to another should be conveyed by some code of signals, and shouting and unnecessary firing should be carefully avoided. The point and flankers fire only when they are certain that they have been seen by the enemy and that he is not retiring.

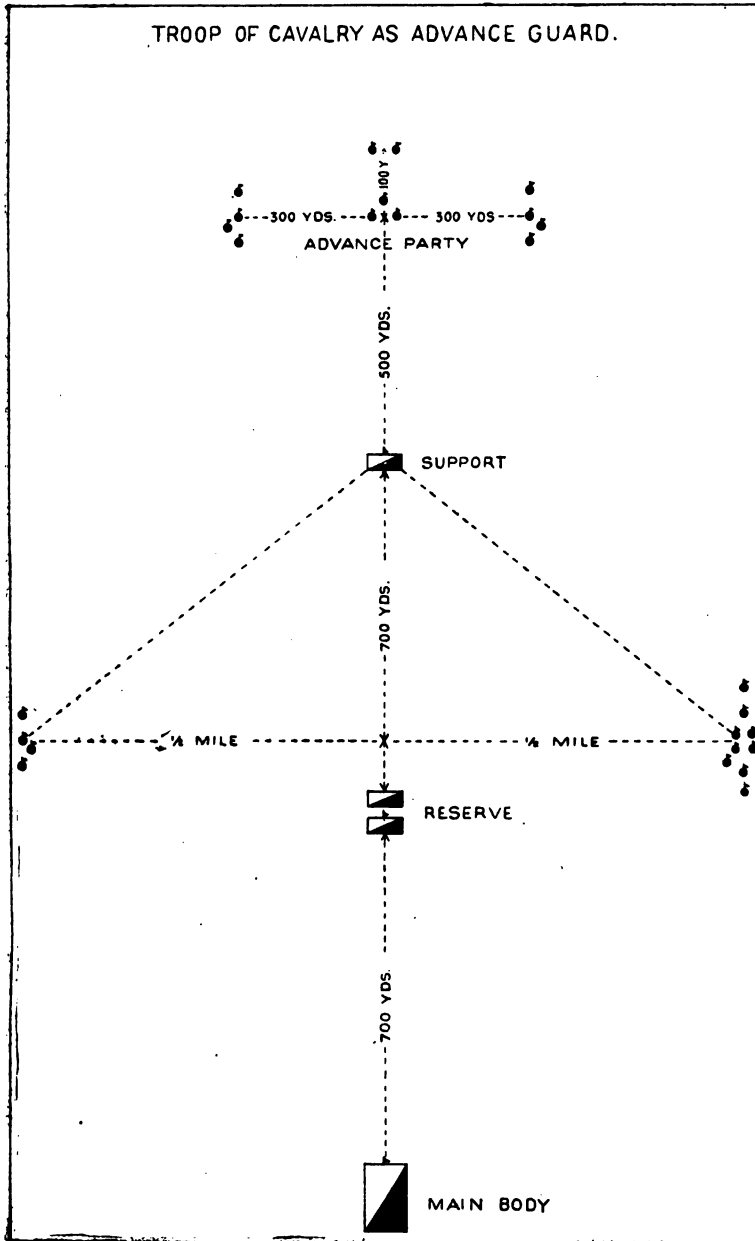
Compliments.—Advance guards, as a body, pay no compliments whatever; but individual soldiers on this duty, as on all other, salute when addressing, or addressed by, a superior officer.

CAVALRY ADVANCE GUARDS.

The formation of a cavalry advance guard is similar to that of one composed of infantry. An advance guard composed of a single troop will be first considered. (See Plate IV.)

If the troop consists of but two platoons, the first constitutes the vanguard and the second the reserve. If there are three platoons, the first and second compose the vanguard, and the third the reserve. When there are four platoons, the first and second form the vanguard, and the third and fourth the reserve. The point consists of four troopers. The flanking groups, each consisting of four troopers, march about 100 yards in rear of the point, and from 300 to 500 yards from the line of march. The advance party consists of the point and flankers, and is under the command of a sergeant, who is generally with the point. In some cases the commander of the advance party may reduce the point to two troopers, holding the other two in rear of the point and abreast of the flankers, or he may march in this position himself without reducing the point. He should be where he can best command and control the reconnaissance of the advance party. The flanking groups are each commanded by a cor-

TRUMP OF CAVALRY AS ADVANCE GUARD.



poral or an old soldier. Generally two troopers ride in front and one in rear of the group commander. The groups may, however, be kept together in any suitable formation, or distributed along the front so as to make an arc of scouts from one extreme flanker, through the point, to the other extreme flanker.

The support follows the point at a distance of 500 yards, a flanking group of from four to eight men being sent out on each flank about half a mile from the column and slightly in advance of the reserve. In an enclosed country these groups would march on the nearest roads parallel to the one taken by the main column, and should keep up communication with the advance guard.

The reserve follows the support at a distance of 700 yards. As a rule, it is kept entire; but, if necessary, flanking parties may be thrown out in such a manner and to such distances as circumstances may require. The main body follows the reserve at a distance of 700 to 1,000 yards.

Communication between the parts of a cavalry advance guard being much easier than in the case of a corresponding body of infantry, connecting files are not so necessary, and may often be dispensed with. No part of the advance guard should, however, lose sight of the body immediately preceding it; and whenever it becomes necessary, one or more troopers should be detached and sent ahead, so as to keep in view both the body in advance and the one from which detached. On a winding road and in a rough country connecting files are indispensable, but they should be called in as soon as the nature of the *terrain* renders their services unnecessary.

If two troops compose the advance guard, the first troop constitutes the vanguard and the second the reserve. In this case the advance party consists of a half-platoon, if there are

but two platoons in the troop; or a platoon, if the troop contains three or four. The members of the advance party not employed as point and flankers form a center group, which marches in rear of the point and abreast of the flankers. Any increase in the strength of the advance party generally increases the center group, the point and flanking groups rarely exceeding four men each.

In the case of a very large advance guard the advance party should consist of an entire troop, in which case it, instead of the support, would furnish the flanking patrols.

It will be observed that the distances and intervals are considerably greater in a cavalry advance guard than in one composed of infantry. Cavalry possessing much greater mobility than infantry, the different covering troops can safely be separated from each other by greater distances in the former than in the latter arm. Moreover, the resisting power of cavalry is less than that of infantry, and when a cavalry advance guard is driven in by the enemy, the ground is passed over more rapidly in retreat than in the case of a corresponding infantry force. Hence, in order to give each successive body in rear time to prepare for action, the distances must necessarily be greater for cavalry. It would seem, however, that in our service these distances might safely be reduced; for American cavalry, which can make effective use of dismounted fire-action, has greater resisting power than European cavalry, and it is not limited, as the latter seems generally to be, to a charge to the front or a flight to the rear.

ADVANCE GUARDS OF ALL ARMS.

To perform its functions thoroughly, an advance guard should be composed of all arms. Reconnoitering duty can be performed more efficiently and more easily by cavalry than by infantry—more efficiently, because a cavalry group can safely push much farther away from the column than an infantry group can, and the field of observation is thus extended; more easily, because a trooper can, with comparative ease, reconnoiter to a degree that would exhaust a foot soldier.

All European authorities recommend the use of cavalry as reconnoiterers, but prescribe that the support should consist in part of infantry to supply the necessary resisting power. In our service this is not in general necessary, as our cavalry has enough resisting power to carry out the delaying action of the support; and nothing but the lack of sufficient cavalry should necessitate the adoption of a composite support. Indeed it is, in most cases, a great mistake so to combine cavalry with infantry as to tie the former down to the pace of the latter. The cavalry should ordinarily be given great latitude in pushing forward, for its great object is to gain information; and even when it constitutes the entire vanguard of a composite advance guard, no attempt should be made to fix the distance between the support and the reserve. If the cavalry push far ahead, the reserve should throw out an advance party with a point and flankers. If pressing closely upon the enemy, the cavalry will probably be delayed enough by exploration and skirmishing to reduce its progress to the pace of the infantry reserve.

Artillery is of great value to the advance guard in preparing the way for the infantry attack, and in compelling the enemy to deploy at a distance. Light field batteries only

should be used with the advance guard, mobility being essential. When the advance guard is specially strong in cavalry, a battery of horse artillery should be attached to it. The guns of a battery attached to the advance guard should be kept together, any subdivision being generally a mistake. Under exceptional circumstances, part of the guns may be with the vanguard (marching with the support); but in such an advanced position the artillery would be liable to suffer from the enemy's infantry fire at short range, and would be exposed to capture by sudden assault. When the front is restricted and the country is hilly, part of the guns may be with the vanguard; for the enemy could find advantageous positions from which to bring guns to bear upon the advance guard, and would have to be opposed by artillery; and in such a country the guns would not be greatly endangered by their forward position, as the enemy could advance only on a narrow front. In a large advance guard (such as that of an army corps) a battery might safely march at the rear of the support. But, as a rule, all the artillery of the advance guard should generally be with the reserve, and should be preceded by a small force of infantry to prevent it from being taken at a disadvantage by sudden attack. In any case, the delay in bringing artillery into action from the reserve would be so slight that but little would be gained by having guns with the vanguard. As the guns should come into action within artillery range, but beyond infantry range, of the enemy's position, they would generally be nearer to their proper position if with the reserve than they would be with the support. The battery commander accompanies the commander of the advance guard on the march and in reconnaissance of the enemy, and receives his orders as to bringing the battery into action.

A few engineers should march with the support, to re-

pair bridges, remove obstacles, etc. If the rest of the support consists entirely of cavalry, the engineers should be mounted. Owing to the small number of engineer soldiers in our army, this duty would generally be performed by pioneer detachments from the infantry.

The proportion of each arm in the advance guard depends upon the nature of the country, the object of the march, and the strength, composition, and proximity of the opposing force. In a close or mountainous country the proportion of infantry should be increased. In an open country the cavalry should be strengthened. If the enemy is strong and near, and a battle seems imminent, the advance guard should be specially strong in infantry and guns. If, however, it is desired merely to develop the enemy without seriously engaging, the advance guard should consist of cavalry and light artillery (horse artillery if possible), as these troops can be more readily withdrawn than infantry. In the pursuit of a beaten foe, or whenever the object is to follow and keep touch with the enemy, the proportion of cavalry should be as great as possible. In any case all three arms are needed.

As a rule, the different organizations of the command perform in turn the duty of advance guard; but in operations of special importance it may be desirable to have the advance guard composed of select troops. Napoleon says: "It is necessary that the advance guard should consist of *élite* troops, and that the generals, officers, and soldiers should thoroughly understand their tactics, each according to the needs of his grade. An uninstructed body of troops would be only an embarrassment to the advance guard."*

Formation Modified by Terrain.—In the formation of an advance guard considerations of *terrain* take precedence over all prescribed rules. If, for instance, a ridge from which

*"Maximes de Guerre et Pensées de Napoléon Ier."

a good view can be obtained lies near one of the flanks, the flankers must be pushed out to the ridge, whether it be nearer or farther from the flank than the normal distance. When the nature of the country is such that flankers are unnecessary or can not keep up with the command, dispositions must be made accordingly. *Whether on active service or merely at drill, the commander of an advance guard, outpost, or rear guard must exercise judgment, and make his dispositions in accordance with the nature of the ground and the real or supposed circumstances of warfare under which he is acting.*

An ingenious disposition of the advance guard made by General Cox, in West Virginia, in 1861, is worthy of remark. The main body of the command, embarked on steamers, moved up the Kanawha river, on either side of which the enemy might be expected. An advance guard accordingly marched along each bank, the main body being held in readiness to land and reinforce whichever one should encounter the enemy.

Encountering the Enemy.—As soon as the enemy is seen, the advance guard must endeavor to ascertain promptly whether it has to deal with an outpost of a stationary force, an advance guard of a marching body, or a flanking detachment of a column. It should lose no time in discovering where the enemy's main position is, or how far away is the marching column. The relative numbers and position and the orders under which the advance guard is acting will decide the question of attacking or taking up a defensive position. The offensive is generally the best, if an attack seems at all likely to succeed. If between the advance guard and the enemy there is an exceptionally good position, the enemy should be attacked vigorously, in order that the position may be occupied and held for the deployment of the main body. If the defensive has been decided upon, and a good

defensive position has been passed a short time before the enemy is encountered, or if the latter is in such force that the advance guard can not hold its own against him, it will be necessary to fall back slowly and stubbornly to the position or upon the main body; the commander of the advance guard sending to the commander of the main body prompt warning of the threatened or actual attack.

It is not always necessary for the advance guard to take up a position on the road by which the main body is advancing. If the latter is compelled in its advance to adhere to the route, it is often better for the advance guard to make a stand at one side, holding the road with only some detached troops. The main body advancing along the road is thus sometimes enabled to make its attack in the most effective direction. Moreover, in case the advance guard is driven back, it will not be pushed directly upon the main body, to which it might communicate its disorder. In case of a sudden encounter with the enemy, the advance guard will probably be compelled to take up a position as best it may, which will probably be on the road. In this case the main body may sometimes be able to advance by a lateral road, to avoid the danger of being compromised in a reverse of the advance guard, and at the same time gain the advantage of a flank attack upon the enemy. When the advance guard is strong and able to hold its own against the enemy for some time, and when the main body does not follow the advance guard too closely, such a movement may be decisive.

ADVANCE GUARD OF A DIVISION.

A division consists of three brigades of infantry and two or more batteries of artillery. As no divisional cavalry is provided, a portion of the corps cavalry must be detached and assigned to the division whenever the latter is acting independently, or when the front is not covered by a general screen of cavalry. The corps cavalry will not comprise more than two regiments, and may consist of only one.*

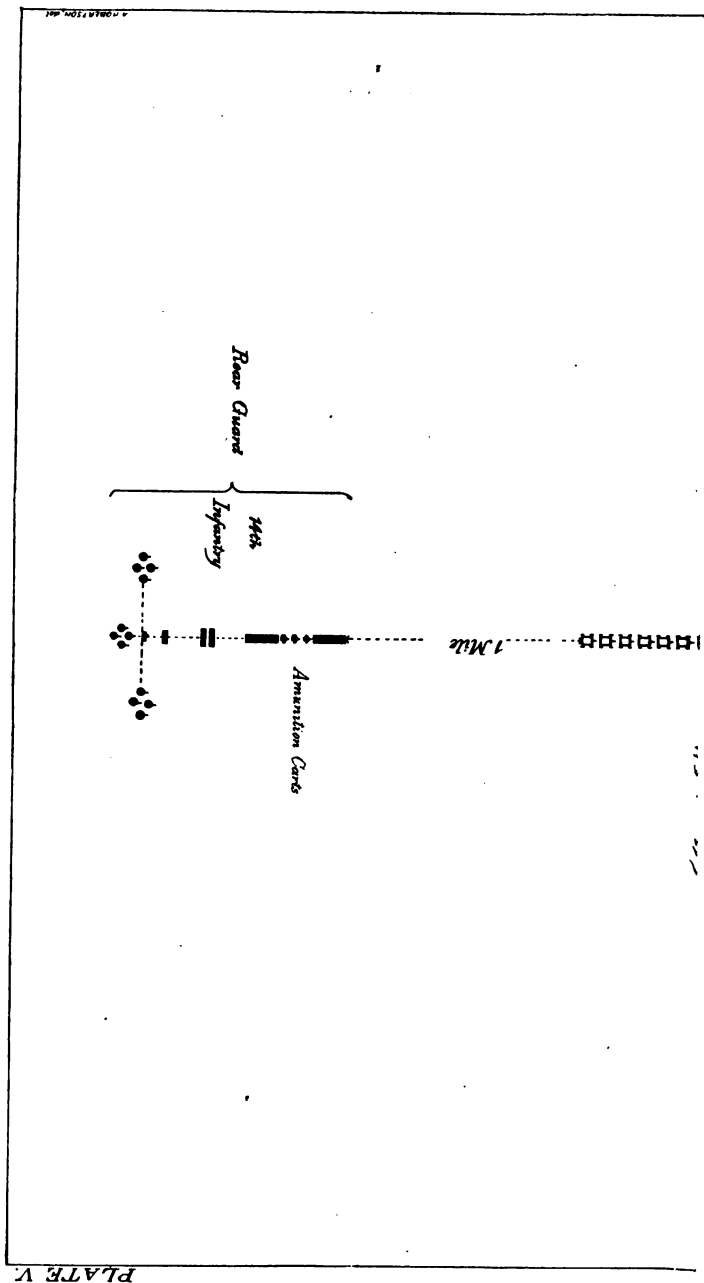
It can not, therefore, be safely assumed that more than one squadron will be assigned to each division. The experience of recent wars would seem to indicate four as the proper number of batteries; and it may be assumed, then, that the division consists of three brigades (composed of nine regiments, or twenty-seven battalions) of infantry, four batteries of light artillery, four troops of cavalry, one company of engineers, three companies of hospital troops,† and a section of signal soldiers.

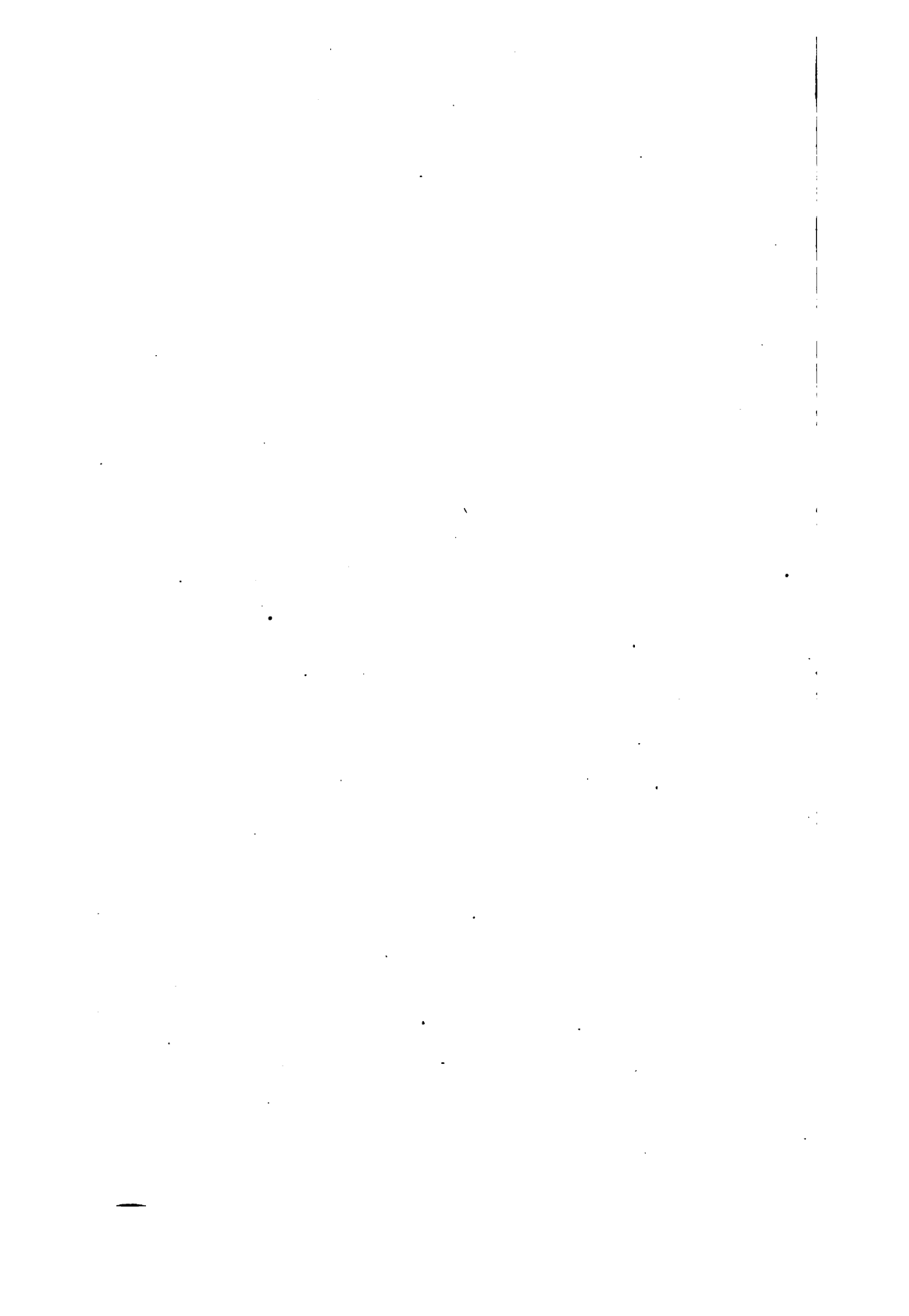
The advance guard of the division might be formed as follows (see Plate V): The advance party consists of one troop of cavalry, its point being about a quarter of a mile in advance, and the flankers at the same distance from the line of march. A flanking patrol would march on each flank, abreast of the advance party, and from two to four miles from it. Each of these flanking patrols should be not less than a platoon, and should be commanded by a lieutenant or an experienced sergeant.

The support follows one mile in rear of the advance party. It consists of two and one-half troops of cavalry, two battalions of infantry, one section of engineers, with a tool

*Infantry Drill Regulations, paragraphs 479 and 484.

†Namely, a bearer company, an ambulance company, and a field hospital. Most of the ambulances and the field hospital would be with the train. For the details of the organization of a division, see "Organization and Tactics," page 34.





wagon; one machine-gun detachment, and infantry ammunition carts. The number of carts is regulated by the fact that as the advance guard may have to fight during many consecutive hours after touching upon the enemy, it should have, including ammunition carried by the soldiers, at least 200 rounds per man.

A flanking detachment varying in strength from one-half to one-fourth of a troop is sent out to each flank from the cavalry of the support. It marches slightly farther out from the line of march than the corresponding detachment from the advance party, and nearly abreast of the reserve.

The reserve follows at a distance of a mile and a quarter. At its head marches the commanding officer of the advance guard, followed by a platoon of cavalry. The rest of the reserve is arranged in the following order: A battalion of infantry, a battery, a regiment of infantry, a section of engineers, infantry ammunition carts, and a platoon of hospital troops with ambulances.

Members of a mounted signal detachment should be with the advance party, the support and the reserve, and at the head of the main body. One or two machine guns might be advantageously used with the support. Connecting files, preferably cyclists, march between the advance party and the support, and between the support and the reserve.

Two or three escort wagons conveying picks, shovels, and axes, in addition to those required for the use of the engineers, should accompany the reserve, following immediately in rear of the infantry. The War of Secession demonstrated the necessity of having at hand every facility for intrenching rapidly and strongly; and these implements would be a valuable addition to the intrenching tools carried by the soldiers. The number and kind of tools would depend upon the nature of the country and the object of the march. If the

advance guard were charged with the duty of seizing and holding an important point, the necessity of intrenching would be imperative. On the other hand, in the pursuit of a beaten foe intrenching tools might be neglected. In a wooded country axes would be a prime necessity; in a prairie country picks and shovels would be most important.*

The main body follows the reserve at a variable distance. In the case of a division the distance would vary from half a mile to three miles, but should not ordinarily exceed a mile and a half.† In the case of large forces the distance may be as great as five miles; or even greater if it be desired to seize some important point even at the risk of incurring the defeat of the advance guard before it can be succored by the main body. On the other hand, if the advance guard is strong and has orders to bring on a battle, the distance may be not more than half a mile. At the head of the main column marches the major general with his staff and a platoon of cavalry. The main body is formed in accordance with the maxim that

*Immediately after the battle of The Wilderness, Lee, learning that Grant was extending his left toward Spottsylvania, began to push forward his own right toward the same point, Fitzhugh Lee's cavalry division in advance. The two armies marched on parallel roads at a short distance from each other. Pushing forward rapidly, Fitzhugh Lee placed his division across the Federal line of advance on the Brock Road, and quickly intrenched so strongly as to thwart all attempts to dislodge him. The important point of Spottsylvania was thus secured by Lee.

Later in the same campaign, the First Cavalry Division (General Torbert) seized and held the important position of Cold Harbor. By some mistake it was withdrawn in the night, but, under orders, retook the position, strengthened it with slight intrenchments, and held it against a determined assault by the Confederate infantry, until the arrival of General Wright with the Sixth Corps placed the position definitely in the possession of the Union forces.

Similar results might often be gained by the advance guard by seizing and intrenching important points.

†It should be remembered that all the distances here given are based on the assumption that the division is operating in an open country. In a close country they would be much less, and in any case they should be regulated by the object of the march and the nature of the *terrain*.

the troops likely to be first needed should be in advance. This would place the artillery at the head of the column, but a small force of infantry must precede it for its protection. We have, consequently, the following arrangement of the main body from front to rear: One regiment of infantry, followed by its ammunition carts; three batteries; one brigade of infantry, followed by its ammunition carts; two regiments of infantry with ammunition carts; the remainder of the hospital troops with ambulances; a platoon of engineers with a bridge train; the ammunition column, and the baggage and supply train. The position of the bridge train depends upon circumstances. Ordinarily it would be with the main body, as stated above, but under certain circumstances, especially in the pursuit of a defeated enemy, it might be with the reserve of the advance guard.

The commander of the first brigade commands the advance guard, all the infantry of which is taken from his brigade. The infantry at the head of the main column also belongs to the first brigade. The infantry of the rear guard (one regiment) is taken from the third brigade. The brigades alternate from day to day in their positions in column.

If the country is close and the enemy's guerrillas are active, detachments must flank the train. These detachments are generally taken from the rear guard.

ADVANCE GUARD OF AN ARMY CORPS.

If the entire corps were operating together, the corps cavalry would screen its front, and the advance guards of the divisions would be composed of infantry and artillery. In view of the protection afforded by the advance screen of cavalry, two regiments of infantry and a battery would probably be sufficient for the advance guard of each division, if

the corps were marching on three parallel roads. If, however, the corps were marching on two parallel roads, the column composed of two divisions should be preceded by at least a brigade of infantry and two batteries.

The above dispositions may be taken as a guide, but must not be blindly followed. In nothing does the adage "circumstances alter cases" find a more complete verification than in the details of the security and information of an army. *No fixed rule for distances and formation can possibly be given. In very few cases, indeed, can the normal distances and formations be used without some modification. The object of the advance guard must be continually borne in mind, and any disposition or formation that will enable it best to perform its functions is right.*

FLANK GUARDS.

It has already been stated that in the case of large forces the flanking parties are taken from the main body. These parties are not mere flanking groups, but are bodies varying in strength and composition from a small patrol of infantry or cavalry* to a large force of all arms.

In the case of a flank march near the enemy, the flank guard becomes a body of the greatest importance, and its composition and formation resemble those of an advance guard. A flank march near the enemy being an especially hazardous operation, and one never made to a great distance, a force undertaking it is generally in light marching order and ready to form promptly for action. For this reason, the distance from the flank guard to the flank of the column is

*The movements of flank patrols and the minor details of the conduct of an advance guard are considered in the chapter on Reconnaissance.

not so great as the distance from an advance guard to the head of the main body. Moreover, the formation from column to a flank can be made more quickly than a formation on the head of the column.

In a flank march it may be necessary to have an advance guard, flank guard, and rear guard, each of very considerable strength.

THE ADVANCE GUARD IN A RETREAT.

When a force is retreating, the functions of security and information devolve upon the rear guard, which is, of course, the force nearest the enemy.* Nevertheless, it is important that there should be a small advance guard, to clear the way for the main body by removing obstacles, repairing roads and bridges, selecting the most practicable routes of march, driving away small parties of hostile cavalry which may have passed entirely around the flanks of the retreating force, and (if in the enemy's country) dispersing bodies of partisans or hostile inhabitants who may be endeavoring to block the way. As already stated, the strength of the advance guard on a retrograde movement would be the same as that of the rear guard on a forward march.†

*See Chapter VI.

†See page 23, *ante*.

CHAPTER III.

OUTPOSTS.

To exercise ceaseless vigilance, to be in constant readiness for action, and to preserve the most profound silence, are the cardinal principles of outpost duty.—*Van Mulken.*

Outposts are detachments thrown out from a force when halted, for the purpose of protecting it from surprise. Like advance guards on the march, outposts are charged with the duties of observation and resistance. They prevent the reconnaissance of the position by the enemy's scouts and patrols, give warning of the approach of hostile bodies, and offer sufficient resistance to the enemy's attacks to enable the main body to prepare for action.

The proper performance of outpost duty is of vital importance to an army, and history presents many examples of disasters resulting from its neglect. At Laon, in 1814, Marmont's neglect to exercise proper vigilance caused him to be overwhelmed by Blücher's night attack. At Shiloh the carelessness with which outpost duty was performed by the United States army enabled the Confederates to form their line of battle deliberately within a mile and a half of the camp of their unsuspecting opponents, and to take the Union forces at a terrible disadvantage. At Vionville, in 1870, Forton's cavalry division was so negligently guarded by its outposts that it was surprised by the German horse artillery, and forced to fly in confusion through the camp of its own infantry. Scores of similar examples might be mentioned.

When a strong cavalry screen is in front of the army, the

duty of observation becomes much less important to the outposts than would otherwise be the case. In 1870 the effectiveness of the cavalry screen was such that Boguslawski says: "As an additional result of the use to which our cavalry was put, we may mention the perfect security and tranquility enjoyed by our army corps on the march and in camp, in rear of the cavalry divisions pushed forward half or a whole day's march to the front. The army corps had not, as a rule, to trouble themselves with outpost duty, but only to provide for the immediate security of the bivouac or cantonment." This was, however, an exceptional condition of affairs, for the German cavalry was strong and enterprising, and the opposing cavalry was weak and dispirited. While a good cavalry screen greatly increases the security of an army, and thus materially lightens the duty of the outposts, it furnishes no excuse for the latter to be careless, or to forget that the duty of observation is inseparably connected with that of resistance.

Unbroken rest at night being necessary for the preservation of the health and efficiency of troops undergoing the hardships and fatigues of a campaign, it is of the utmost importance that the repose of the army in camp or bivouac should not be disturbed by needless alarms. The army must feel that the vigilance of its outposts enables it to sleep in security.

The duties of the outposts may be classified as follows:

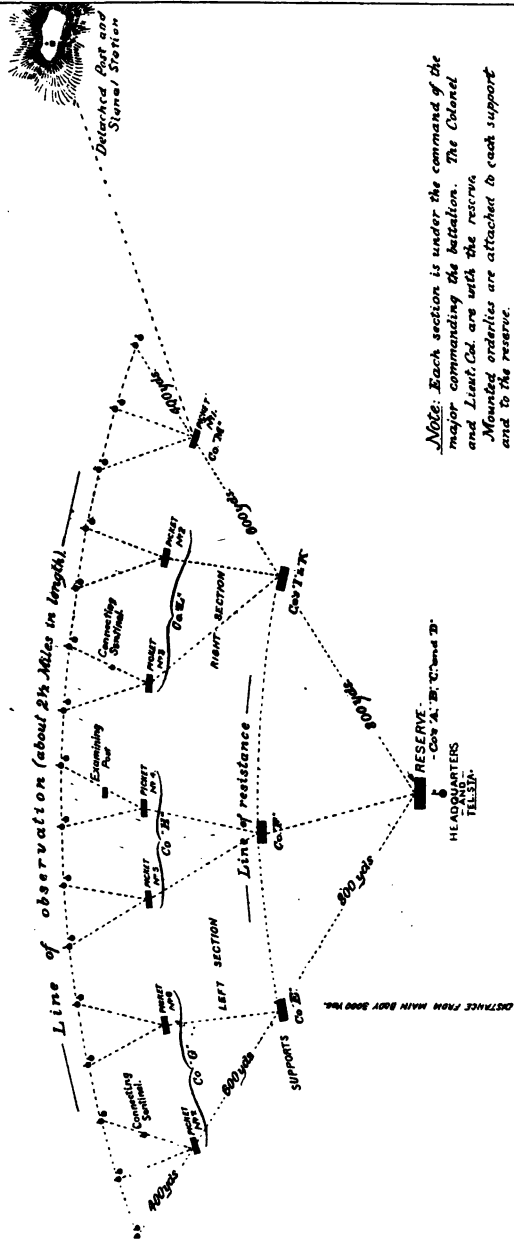
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|--------------|---|--|
| Observation: | { | 1. To observe constantly all approaches by which the enemy might advance. |
| | { | 2. To watch, and immediately report, the movements of the enemy. |
| Resistance: | { | 1. To prevent reconnaissance by the enemy. |
| | { | 2. <i>Above all</i> , to check the advance of the enemy long enough to enable the main body to prepare for action. |

Subdivisions of the Outpost.—The outpost is divided into four parts, namely: 1. Sentinels or vedettes; 2. Pickets; 3. Supports; 4. Reserve. The sentinels or vedettes occupy the *line of observation*. They are sent out from the pickets, and supported by them. The supports usually occupy the *line of resistance*, and are supported by the reserve.

In an infantry outpost the pickets are from 100 to 400 yards in rear of the sentinels; the supports, from 400 to 800 yards in rear of the pickets; and the reserve, from 400 to 800 yards in rear of the supports. In a cavalry outpost the distance from the vedettes to the picket is about 600 yards, and the other distances vary between the limits of 1,200 and 2,000 yards. These distances can not be definitely fixed, as they depend upon many circumstances of ground, weather, and the nature and proximity of the enemy. When the outpost occupies a strong defensive position and the approaches from the rear are open and unobstructed, the distances may be much greater. The only essential requirement is that the supporting bodies should be able to reinforce in time. Thus, in an infantry outpost, if the support can be depended upon to hold its position for half an hour against a heavy attack, and the reserve can be kept in instant readiness, the latter may be held back at any distance not exceeding that over which it can march in twenty minutes, or, in other words, a mile. Such a great distance would, however, be quite exceptional, and would be justified only by the conditions supposed. The distances given above may be regarded as approximations to those that might be adopted in most cases.

The general plan of an outpost may be likened to an open fan, the sentinels being along the outer edge; or, better yet, to a hand with the fingers extended and widely opened. A line along the tips of the fingers would represent the chain of sentinels; the first joints, the line of pickets; the second

Regiment of Infantry as Outpost for a Division.



joints, the line of supports; and the knuckles, the line of the reserve; while the wrist would represent the position of the main body. (See Plate VI.)

The reserve generally consists of not less than one-third nor more than one-half of the entire outpost. The strength of the supports and pickets would consequently vary from two-thirds to one-half of the outpost. The strength of each picket depends upon the number of sentinels and patrols that it has to furnish, and the size of each support is regulated by the principle that it should be equal to the aggregate strength of all the pickets supported by it. As a general rule, one-third of the outpost would be assigned to the reserve, one-third to the supports, and one-third to the pickets and sentinels.

Two Systems of Outposts.—Outposts are of two kinds: the *cordon* system, in which the entire front is covered with a chain of sentinels; and the *patrol* system, in which only the roads and other avenues of approach are guarded by sentinels, closely backed up by pickets, while the intervening country is constantly patrolled. The best results are generally obtained by a combination of the two systems.

Position.—The outpost must cover the front of the army and overlap its flanks, unless the latter are secured by impassable obstacles. A prominent natural feature should be selected to mark the general line, such as a ridge, a river, or the farther edge of a wood. The most favorable position will be one which furnishes a good view and field of fire to the front, while affording concealment from the enemy and shelter from his fire. One of the best positions is, therefore, a wood held at the edge toward the enemy, and one of the worst is a wood held at the nearer edge.*

*When Banks, falling back after his defeat at Sabine Cross Roads the day before, took up his position at Pleasant Hill (April 9, 1864), Benedict's brigade of the Nineteenth Corps was in line in an open

If the farther edge is too distant to be occupied, and no broad roads or continuous clearings exist in the wood, the measures to be taken will depend upon the length of time the position is to be occupied. If the outpost is to hold the position for some time, as, for instance, in the case of the investment of a fortified place, a belt at least twenty yards wide should be cleared, an entanglement made of the felled trees, and the sentinels posted along the near edge of the belt. If the entanglement consists of obstacles of such a nature that they might furnish shelter to the enemy, it should be placed on the near side of the clearing; otherwise on the far side. Thus felled trees, trous-de-loup, etc., would be at the near edge, while wire entanglements, etc., would be at the far edge. If, as is usually the case, time and opportunity do not admit of making such a clearing, and the outpost line *must* traverse the wood, the line of sentinels should be along a stream, ordinary road, or ridge overlooking a valley, so as to get the best view practicable under the circumstances. In holding the outpost line in a heavy forest, it would be well to make use of Cossack posts closely backed up by the supports, the posts sheltered by barricades of timber, patrolling in front being constant. Instead of carrying the outpost line through the wood when the farther edge can not be occupied, it is generally advisable to place the sentinels under cover of some kind, facing the wood, and at least 200 yards from the near edge, *the wood being patrolled*. Where a stream,

field within effective infantry range of the southern edge of a forest. The outpost covering the brigade was established in the wood, the pickets being only a short distance from the southern edge. The Confederates, advancing from the north, through the wood, drove in the outpost, and, with little or no loss, took up a position at the edge of the wood, where they were sheltered by the trees, while the Union troops were not only in the open, but had their fire masked for a time by the outpost troops retreating across the unsheltered space. The Federal brigade was soon thrown into confusion, and suffered heavy loss, its commander being among the killed.

canal, or other obstacle having but few passages, lies parallel to the outpost line, the sentinels, or even the pickets, may sometimes be posted beyond it; but the supports should be kept on the near side for fear of so large a body being cut off before it could make good its retreat. It would generally be best to keep even the line of sentinels on the near side, and merely patrol beyond the obstacle. The sentinels may be withdrawn some distance from the obstacles, especially during the day, if they can thus get a more extended view or find better cover.

The outpost line is convex towards the enemy, or straight with its extremities thrown back. Unless the nature of the ground compels, it should never be concave, even when that is the shape of the position which it covers. It does not necessarily conform to the line of the position in any case.

Strength.—To avoid overtaxing the troops, the strength of the outpost should be the least that is compatible with the proper performance of its functions. It depends upon various considerations, such as the nature of the country and the strength, proximity, and character of the enemy. In a country well adapted to defense, smaller numbers suffice than in an open country. When the enemy is near and aggressive, the outposts must be strong and vigilant. The strength of the outpost will also depend upon the plan of action determined upon in case of attack. If the line chosen for the deployment of the main body coincides with the line of resistance of the outpost, the latter force must be strong enough to hold the chosen position to the utmost. If it is decided to fall back upon the main body, the outpost not only may be, but should be, weaker than in the former case, as a strong force would be more likely to become compromised in a serious engagement than a weaker one.

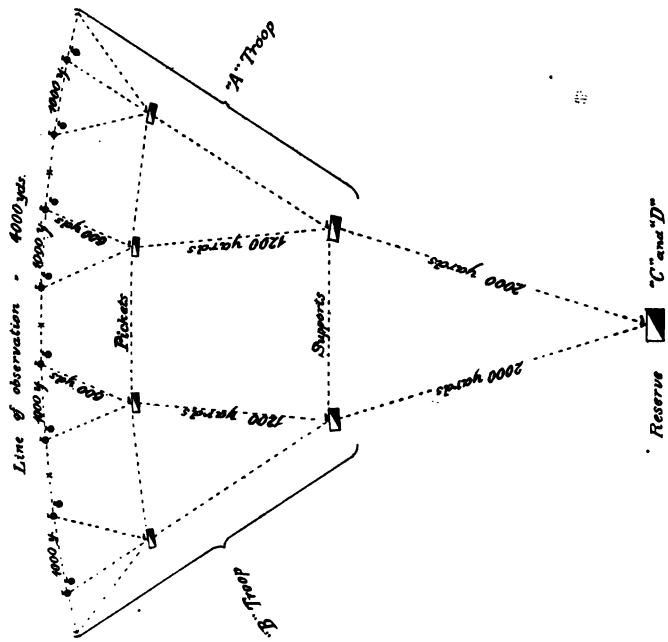
The strength of the outpost thus depends upon so many

different considerations that no definite rule on the subject can be prescribed. Clery gives six different examples of outposts in the European wars of 1866 and 1870-71, in which the strength varies from 250 to 1,000 men to a mile. As a rule, the maximum strength of an outpost is one-sixth of the entire force. This proportion should not be exceeded, except in case of absolute necessity, and it should be less whenever a reduction is consistent with prudence.

Composition.—When an army is on the march from day to day, the advance guard constitutes the outpost at each halt; but if its duties during the day's march have been arduous, it must be relieved, as soon as practicable, by fresh troops. If outposts are required on the flanks and rear, they will be composed of the flank and rear guards, when such guards exist in sufficient strength; otherwise such outposts are taken from the main body, which will also furnish them when the duties of the flank and rear guards during the day have been especially trying. In the disposition of an outpost the different tactical units should as far as practicable be kept intact. Thus, supposing the outpost of a division to consist of a regiment of infantry, the reserve might be composed of the first battalion; the supports, of two companies of the second battalion and two of the third, each supporting the remaining companies of its own battalion, which would constitute the pickets and sentinels. (See Plate VI.) Similarly the outpost of a cavalry brigade (three regiments) might consist of a squadron arranged as shown in Plate VII.

Each division will generally furnish the outpost for its own front. In a large force especially this principle may be advantageously applied to brigades. In this case the outpost of the division might consist of a battalion (four companies) from each of the three brigades. The brigade outpost would then have two companies in reserve, one in the

Squadron of Cavalry Outpost for Cavalry Brigade



support, and the other furnishing the pickets and sentinels. As alternative formations, one company might furnish the reserve; two, the supports; and one, the pickets and sentinels: or the reserve and support might each consist of one company, the pickets and sentinels consisting of the other two. The outpost of each brigade would be under the command of the officer commanding the battalion composing it, and would constitute a section of the general outpost. An officer should be detailed to command the entire outpost.

If two brigades encamp in the first line, with the third in reserve, the outpost for the division is taken from the first two. If outposts for the flank and rear should be necessary, they should be taken from the reserve brigade.

All the baggage of the troops on outpost duty remains in rear with the main body, the only vehicles brought up being those containing intrenching tools and a part of the reserve ammunition.

An outpost may consist of infantry, of cavalry, of both, or of all three arms. The proportion of the different arms depends upon circumstances. In an open country, in day-time, the duty can be best performed by cavalry. In a close country, at night, and when the enemy is near, infantry is preferable. The best performance of outpost duty requires a combination of the two arms. Cavalry is of the greatest value when pushed well to the front as a screen, but it may often be advantageously combined with infantry in the outpost proper. It may thus occupy look-out stations too distant to be held by infantry, or to patrol to a distance beyond the outpost that would be impracticable for the latter arm. When a considerable portion of the outpost line is in wooded or enclosed country and the space adjoining it is open, it may sometimes be advisable to hold the former portion with infantry and the latter with cavalry; but such a formation

cannot generally be recommended. As a rule, when it is impracticable to use the cavalry as an advanced screen, its use with the outposts should be limited to patrolling and to furnishing orderlies, when necessary, to the pickets, supports, and reserve. The experiment was made at Metz of employing cavalry on picket duty, but it was soon given up, and the use of cavalry with the outposts confined to attaching mounted orderlies to the infantry pickets. True, the German cavalry was not as well suited as American cavalry to this duty; but it may safely be laid down as a general rule that cavalry ought never to be used on any duty that can be performed as well, or better, by infantry.

When cavalry is used with an outpost, it should be employed in constant and vigilant patrolling as far to the front as may be consistent with reasonable precautions for safety; but a squadron should not be used where a troop, or perhaps a few small patrols, could perform the duty equally well. Moreover, the use of mounted orderlies with the pickets, supports and reserve should be limited to the requirements of actual necessity. If the duty of patrolling and furnishing mounted orderlies does not employ all the cavalry of the outpost, the rest should be held in hand by the outpost commander with, or near, the reserve, at a point on one of the main roads leading towards the enemy, whence it can be quickly sent forward in any emergency requiring its action. It would generally be a mistake to employ cavalry as pickets with infantry supports, as in the case of an attack upon the outpost such pickets would be thrust back upon the infantry, with which they would be intermingled in such a manner as to hamper the correct tactical handling of the two arms.

Too much stress cannot be placed upon the fact that the best use of cavalry in the service of security and information is as a body constituting a screen so far in advance of the

general outpost line as to be quite independent of it.* When such use is impracticable, and its service as a part of the outpost proper is, for any reason, necessary, its employment should be strictly limited to those duties for which it is especially suited. Cavalry is an expensive arm; its efficiency is more easily impaired than that of infantry; and its peculiar uses are of such vital importance to an army that its strength should not be needlessly frittered away.†

Commanders inexperienced in the mounted service are too apt to impose heavy outpost duty on the cavalry as a matter of convenience. The superb cavalry force of the Army of the Potomac was badly treated in this respect. In describing the condition of the cavalry corps when he assumed command of it, General Sheridan says: "The horses were thin and very much worn down by excessive and, it seemed to me, unnecessary picket duty; for the cavalry picket line almost completely encircled the infantry and artillery camps of the army, covering a distance, on a continuous line, of nearly sixty miles, with hardly a mounted Confederate confronting it at any point. From the very beginning of the war the enemy had shown more wisdom respecting his cavalry than we."‡

Artillery is of great value to an outpost when it can be so posted as to command an important road or defile, and be at the same time beyond the effective range of the enemy's rifle fire. It may aid materially, with shrapnel fire, in supporting the advanced portions of the outpost and in covering their retreat. It should be in constant readiness to move

*See Chapter V.

†It would be well to furnish each regiment of infantry with a sufficient number of horses to provide for mounted orderlies with the outpost and the mounting of the commanders of the advance guard and vanguard.

‡"Personal Memoirs of P. H. Sheridan," Vol. I., page 355.

from one point to another, the horses being kept harnessed, and only a portion fed or watered at a time. Only the limbers should be with the battery, the caissons and other carriages being at the rear. If possible, the guns of a battery should be kept together. Emergencies may, it is true, demand the detachment of guns; but, as a rule, it is a mistake to divide a battery, especially if the pieces are so separated as to deprive the battery commander of the power to use them in concert. All cover afforded by the ground should be utilized for the concealment of the guns from the enemy; and the pieces should not be exposed, except when some definite object is to be gained. As a rule, they should not take position within artillery range of ground on which the enemy's batteries could take post unperceived; should it be necessary to do so, they must be carefully concealed and their prompt withdrawal provided for. The artillery, when not posted to command bridges or roads, should be with the reserve, preferably near a road. Machine guns may be used with the outpost to command approaches with long-range fire. Horse artillery is best suited to the requirements of outpost duty.

Distance of Outposts from Main Body.—The outpost must be far enough from the main body to give the latter time to form for action before the outlying troops are driven in. On the other hand, it must not be so far distant as to be in danger of being cut off by the enemy. The distance will also depend upon the strength that can be spared for the outpost line, the length of the line increasing almost in direct proportion with the distance. When the country is open, the distance will generally be greater than in an enclosed country which offers good positions for defense. When the main body is under the enemy's artillery fire, it can not form for action in the security which it needs; but if the line of resist-

ance is at a distance from the camp or bivouac equal to the limit of the effective range of artillery, the outpost must be driven from that line before the main body can be subjected to the fire of the hostile guns. The supports (occupying the line of resistance) should, therefore, be at a distance of about 3,000 yards from the main body. This fixes the line of supports, at proper distances from which the other parts of the outpost are established. The maximum distance from an infantry outpost to the body which it covers is about three miles, supposing the outpost to be of considerable strength and strongly posted.

THE COMMANDER OF THE OUTPOST.

The officer detailed to command the outpost makes his headquarters with the reserve, and establishes there his field telegraph or signal station. If the front of the outpost is considerable, it is divided into sections of about a mile or a mile and a half for infantry and three miles for cavalry, and an officer assigned to the command of each section. Each section commander makes his headquarters with one of his supports, and is under the orders of the commander of the outpost. When each brigade guards its own front, the sections of the outpost coincide with the brigade fronts.

The outpost commander receives from the commander of the forces instructions as to the general front to be occupied by the outposts, their object, and the amount of resistance they are expected to make. He is also informed about the avenues of approach from the direction of the opposing force, and is made acquainted with everything known in regard to the position and probable intentions of the enemy. He then determines the strength of the reserve, supports, and pickets; decides upon the distance of the line of resist-

ance from the main body, and selects a line of observation farther in advance. A good topographical map of the position selected for the camp and the surrounding country would enable him to choose these positions at once. In the absence of such a map they must be determined by reconnaissance, and in any case the ground must be carefully examined before the detachments move out. The station of the reserve is next fixed, the positions of the supports pointed out, places for the pickets approximately designated, and the general line of the sentinels roughly indicated.

The outpost commander then gives instructions to his subordinates as to:

1. The general front of the outpost line.
2. The ground to be occupied by each.
3. The positions of neighboring supports and pickets.
4. The night positions of the pickets and supports.
5. What is known of the enemy and his probable movements.
6. The approaches by which the enemy might advance.
7. The direction and method of patrolling.
8. What is to be done in case of attack.
9. How flags of truce and deserters are to be received.
10. The kind of reports required.
11. Where he himself is to be found.
12. The countersign and parole.

When the outpost has been posted, its commander makes his inspection; orders such changes in the positions of supports, pickets, or sentinels as may seem advisable; sees that the roads and paths leading from the enemy are properly guarded; gives directions for the fortification of such parts of the position as need strengthening; and is especially careful that the flanks are secured by resting them on impassable obstacles, or by refusing them and protecting them by de-

tachments. As a rule, the outpost should strengthen its position by intrenching. A continuous line of intrenchments is out of the question, as it would require too much labor to make it and too many men to hold it; but each picket and, above all, each support should intrench when practicable. Whether the reserve should intrench or not will depend on circumstances. If the outpost remains in the position for some time, the sentinels should shelter themselves in pits about two and a half feet in depth, the earth being thrown up toward the enemy and covered with sod or twigs, in order that it may not attract attention.

The outpost commander sends to the commander of the main body all information received, first testing its accuracy as far as he can without delay in its transmission. If time is lacking for such test, he sends back the information with a clear statement of the source from which it came, and afterwards sends back any corroborative or contradictory news he may receive in regard to the matter reported.

SENTINELS AND VEDETTES.

Sentinels must be so posted as to have a good view to the front and flanks, and be concealed as much as possible. They do not walk their posts, but remain stationary, being generally posted double, so that one man may go to examine any suspicious point while the other remains on post. They may also be posted in groups. In the former case the reliefs not on post remain with the picket; in the latter case the group accompanies the sentinel to his post and remains in concealment a short distance behind him. When the group system is used, a single sentinel for each will suffice by day, but double sentinels should be used at night. As the group furnishes the reliefs, it should consist of three or six men, and

every two or three groups should be under charge of a non-commissioned officer.

There should be easy communication with neighboring sentinels and with the picket, and a clear view of all approaches; and the post (especially at night) should not, if it can be avoided, be so situated that the noise of falling water or the sighing of the wind through the trees would deaden the noise of approaching footsteps. Sentinels are generally not less than 100 nor more than 400 yards apart—the lesser limit being usually the minimum for single sentinels, and the greater limit the maximum for double ones. Vedettes may be as far as 600 yards apart. But no definite rule can be laid down in this matter, except that the number of posts should be as small as may be compatible with a vigilant watch on all points at which the enemy might approach. The posts furnished by each picket are numbered from right to left.

Sentinels should watch and listen without betraying their own presence; but observation is the first consideration, and concealment is of secondary importance. A sentinel must expose himself to see, rather than limit his observation for the purpose of remaining concealed.

Sentinels must not smoke, and such conversation as may be necessary between them must be conducted in a whisper. The sentinel must not have about him any glittering accoutrements; and, except in foggy weather or on a dark night, must keep his bayonet in its scabbard.

Each sentinel should clearly understand the following:

1. The countersign.
2. The number of his own post.
3. The number and position of his own picket and the name of its commander.
4. The position of the neighboring sentinels and of the examining post, when there is one.

5. The direction of the enemy and the probable line of his advance.

6. The points to which all roads, paths, and railroads in sight lead.

7. The names of all villages and rivers in view.

8. The signals by which he should communicate with the pickets or detached posts.

The mistake of giving sentinels too many instructions and orders should be avoided. If his mind is burdened with many details, the sentinel is likely to become hesitating, timid, and confused. *The principal thing is that he should know where to look for the enemy and what to do if he sees him.*

Only persons in the performance of duty with the outpost, or having authority over it, are allowed to cross the line of sentinels. All other people, with the exceptions below, are halted, not more than one being advanced at a time, and then conducted to the examining post. If there is no examining post, they are conducted by one of the sentinels back to the picket, or detained until the arrival of the visiting patrol. If they refuse to halt, or attempt to escape, they must be shot down.

Deserters from the enemy are halted at some distance from the post, and required to lay down their arms. The commander of the picket is at once notified, and he sends out a patrol to bring them in. If the deserters are pursued by the enemy, they are ordered to throw down their arms, the picket being at the same time alarmed. If they refuse to obey the order, the picket opens fire on them as a necessary precaution against a possible ruse on the part of the enemy. As a rule, inhabitants and deserters are not allowed to cross the line of sentinels at night. An exception to this rule, in the case of deserters, is when the demoralization of the enemy is known to be such that wholesale desertions are to be

expected. Under any circumstances too much care can not be exercised in receiving deserters. In the spring of 1865 there were many desertions from Lee's army, and the Federal sentinels in front of Petersburg had fallen into the habit of allowing the deserters to bring their arms in with them. Taking advantage of this carelessness, the Confederates, on the morning of the 25th of March, quietly gained possession of several picket posts by means of sham deserters, and, immediately thrusting in a storming party, overwhelmed the trench guard, broke the main line between batteries 9 and 10, turned to the right and left, captured battery 10, and overpowered the garrison of Fort Stedman.

When a flag of truce approaches, the bearer and his escort (if he have one) are halted in front of the line of sentinels and ordered to face in the direction from which they came. Word is then sent back to the commander of the picket. While the bearer and his escort are halted, the sentinel must not converse with them nor allow them to reconnoiter.

The vigilance of the sentinel in watching the enemy must not be disturbed by any requirements of military etiquette. He pays no compliments and takes no notice of any of his officers who come upon his post, unless addressed by them, except so far as may be necessary to challenge and identify them.

Everything observed by the sentinel in regard to the enemy should be communicated at once to the picket, especial care being taken to report promptly all indications of the enemy's approach. If the sentinel is satisfied that the enemy is advancing to attack, he gives the alarm by firing; but when immediate alarm is not necessary, firing should be avoided; it disturbs the repose of the troops, and if groundless alarms are frequently given, the troops grow careless and fail to heed the warning when real danger comes. The

so-called "picket firing," so common in the early days of the War of Secession, deserves even more serious condemnation than it has generally received. It seems to have been the custom of the sentinels to fire whenever a sentinel of the opposing force was seen. This slaughter of sentinels doubtless added considerably to the aggregate loss of life, but it probably never benefited either army, while certainly acting to the detriment of each. The sentinel, by firing, often needlessly alarmed his own outpost, and gave a certain amount of information to the enemy by betraying his own position; while by remaining hidden and watching carefully he might have been able to give a valuable report of the disposition of the opposing outpost. As the armies grew in their knowledge of "the trade of war," this pernicious custom disappeared; quite as much, it seems, from the good sense of the soldiers themselves as from orders from higher authority.*

It is advisable to keep the same men on the same posts instead of changing them to new ones each time they are posted. For very important posts the most intelligent men should be selected. If the army is stationary, the sentinels should be divided into regular reliefs, which should be on post two hours at a time during the day, and an hour at a time during the night. If, however, the army is to march the next day, it would generally be better to post the sentinels after the manner of a "running guard," as the men should not be unduly fatigued before beginning the day's march. In a running guard all the privates of a company are detailed as sentinels an hour at a time, thus giving each man only a short period of sentinel duty during the night. In very inclement weather, sentinels should be relieved every hour during the day as well as at night.

*Sentinel firing might be employed for the purpose of annoying the enemy when it is practicable for a sentinel to play the part of a harassing patrol (see next chapter), but such exceptional cases serve only to mark the general rule.

The foregoing principles are applicable to vedettes as well as sentinels. Vedettes, like sentinels, are posted in pairs, and for similar reasons. One is habitually six or eight yards to the right or left rear of the other; a greater distance would make the horses uneasy, and thus distract the attention of the riders, while a less distance would encourage conversation between the vedettes. When cavalry is operating in a close or wooded country, the vedettes may dismount, one holding the horses while the other keeps watch. Whenever the vedette can perform his duty dismounted, he should do so as a means of sparing his horse. The horse may sometimes be held, with the lariat, behind the brow of a hill, while the vedette, lying down, peers over the crest. In any case, the mode of action must be determined by the two considerations of observation and concealment, it being always remembered that it is more important to see than to avoid being seen.

Connecting Sentinels.—When the sentinel post is not in plain view of the picket, a connecting sentinel is posted at a point where he can see the post and be seen by the picket. It is his duty to transmit signals from one to the other. Connecting sentinels are always single. A connecting vedette is generally mounted by day, and always at night. If dismounted, his horse is with the picket.

The Picket Sentinel.—A single sentinel is posted at the picket to keep a lookout on the sentinels or connecting sentinels, and report all signals made by them or any unusual occurrence. In a cavalry picket the sentinel is dismounted.

Examining Posts.—It is recommended by many military writers that no persons, except in the performance of duty with the outpost, be allowed to pass the line of sentinels except at certain designated points on the main roads, where examining posts are established, each consisting of an officer

or non-commissioned officer and six men—three reliefs for one double-sentinel post. On the approach of any person to the examining post, one of the sentinels advances and halts him at some distance from the line, while the other notifies the commander of the post, who examines the stranger, and either allows him to pass or conducts him to the commander of the picket. Any person approaching the line of sentinels at any other than a designated point is passed along from post to post until he is brought to the examining party; care being taken that he is not given an opportunity to observe the location of the pickets and supports. The bearer of a flag of truce, or a suspected spy, should be blindfolded before being conducted to the examining post, if he be conducted thither. As a rule, the bearer of a flag of truce is not allowed to cross the line of observation, all communication with him being held beyond the chain of sentinels. If brought within the lines, he should invariably be blindfolded before entering.

Examining posts do not seem to have been used at any time in the armies of the United States. Though they are in use in the German, Austrian, and Dutch armies, and have the sanction of such authorities as Von Waldersee, Van Mullen, and Shaw, their use is doubtful. If the sentinels are intelligent and well instructed, and the non-commissioned officers on duty with the outpost understand their business, examining posts would seem to be generally unnecessary. In the close investment of a place, or when preparations are being made for the secret execution of an important movement, orders will probably be given to allow no persons to pass the chain of sentinels without the most rigid scrutiny; and in such cases examining posts may be of use, if care is exercised to see that the people conducted to them do not thus gain an opportunity of spying out the dispositions of the outposts.

Detached Posts.—Small parties are often detached from a picket to protect exposed points or support isolated sentinels. These detached posts consist generally of from three to twelve men, and are under an officer or non-commissioned officer, according to their strength and the importance of their position. They are, in fact, small pickets, and must act in concert with the pickets from which they are taken.

A bridge on a flank might be held by a detached post. An isolated hill, affording a good outlook, too far to the front to be included in the general line, but near enough to be occupied without extreme risk, should be held by such a post, communicating with the outpost by signal. If there is reason to expect the enemy to attempt to occupy the hill, a support may be pushed forward to assist in holding it against an isolated attack, but not against a general advance.

If practicable, detached posts should be relieved every six hours. They are not allowed to light fires, and the men are required to keep on their equipments and have their arms constantly at hand. In a detached post composed of cavalry the horses are kept constantly saddled and bridled and held by horse-holders, three-fourths of the men being ready to fight on foot. The sentinels or dismounted vedettes are posted close in front of the party. Vedettes may be pushed farther forward.

PICKETS.

An infantry picket generally consists of from 25 to 50 men, and a cavalry picket usually varies between 20 and 30. A picket furnishes from two to four double sentinels or vedettes, there being three reliefs for each post. If detached posts are to be sent out from the picket, corresponding additional strength must be given it, and an allowance must be

made for patrolling. The requirements for patrolling vary so much that the proportion of the picket to be used for that purpose can not be fixed. Generally, about a third of the picket should be used in patrolling. In a close country, the patrols, rather than the sentinels, should be increased; and at night the patrols are the principal reliance for observation. There should be enough men for three patrols, so as to admit of one patrol being out, one ready to go out, and one resting. This is especially the case with a cavalry picket. The strength of the picket will thus vary; but its *minimum* strength must allow six men for every double-sentinel post, three for each connecting sentinel, three for the picket sentinel, and at least three non-commissioned officers. These are the barest requirements, without considering patrols. The picket commander should always, if possible, be a commissioned officer.

It has already been stated that the distance between sentinels will vary from 100 to 400 yards, the smaller limit being in the case of single sentinels, four of whom could easily be supplied by a small picket. The minimum front covered by the sentinels of a single picket may, therefore, be placed at 400 yards. The maximum front, even when the picket furnishes four double sentinels, may be placed at 800 yards: for, as we have already seen that the distance from the sentinels to the picket may be as great as 400 yards, it is evident that with a front of 800 yards the commander of the picket or the reliefs, in visiting or relieving the sentinels, would have to go about a mile. The front covered by the vedettes of a cavalry picket varies from 1,000 to 2,000 yards. Infantry pickets are generally from 600 to 800 yards apart, and cavalry pickets from 1,000 to 1,500 yards. All these distances vary with different circumstances of ground and weather: the distances given above have been found by experience to answer in many cases, but they must often be materially changed.

The line of resistance should be made the first consideration in selecting the ground for the outpost; then the line of observation should be fixed, the position of the sentinels regulating that of the pickets, and not the reverse. The following points should be considered in posting a picket:

1. It should be near enough to the sentinels to give them prompt support, but not so close as to be involved in their disaster if they should be surprised and suddenly driven in.

2. It should be posted on, and command, some route leading from the enemy; the largest pickets on the most important routes.

3. It should be in a good defensive position, should have a good field of fire to the front, and should be so far concealed that the enemy could not discover it without attacking.

4. It should, as far as consistent with the foregoing requirements, be in rear of the center of its line of sentinels.

5. It should have free approaches to its sentinels, neighboring pickets, supports, and reserves, and should have a good line of retreat.

6. It should be close enough to the neighboring pickets for mutual support, and a mutual flanking fire should be provided for.

A position fulfilling all these requirements can scarcely be hoped for; the best position will be the one which fulfills the greatest part of them.

If the picket is posted in a defile, its front should be covered with obstacles, in order that it may not be overpowered by a sudden rush of the enemy.

A picket should not be posted in a house nor in an enclosure. An exception to this rule is found in the case of a besieging force, whose front is covered with formidable obstacles. Thus, at the siege of Paris, the German pickets

were frequently sheltered in houses or in underground posts, security from surprise being afforded by constant patrolling well to the front, and by formidable abatis in front of the line of sentinels.

Any junction of roads leading from the enemy's position should be in front of the picket, and roads passing the flank should be carefully guarded.

When an impassable obstacle, such as a swamp, lake, or stream, lies along a portion of the front of the outposts, the strength at that part of the line may be limited to the requirements of observation, the sentinels being few, and the chief reliance being placed upon patrolling.

Other considerations affecting the position of the picket have already been noticed in connection with the general subject of the position of the outpost.

Fires should not be lighted by a picket unless they can be well concealed from the enemy. If a fire is allowed at night, the rallying point should be some distance in its rear. If the enemy attacks, he will almost invariably march upon the fires, and will thus be clearly visible, while the picket will have the advantage of the darkness.

The men composing the picket stack arms and may remove their equipments, with the exception of the cartridge belt. They must not leave the immediate vicinity of the picket, and must be ready to fall in at a moment's notice. Part of the men must be constantly under arms at night, and separated from the rest, who keep their arms close at hand while sleeping. If danger seems imminent, the entire picket must be awake and under arms. The commander of the picket will cause it to stand to arms at once if a noise is heard from a neighboring picket; and if that picket is attacked, he will endeavor to relieve it by an attack upon the enemy's flank. If an attack is not evident, but the noise seems suspicious, a patrol must be sent to investigate.

In a cavalry picket, or in the case of mounted orderlies attached to an infantry picket, the horses should be kept constantly saddled, and the bridles should be taken off only for feeding and watering. Not more than one-third, or at most one-half, of the horses should be fed at a time. When there is no water close to the picket, only a few horses should be taken to the water at a time, the men in charge of them being under arms and fully equipped. Saddles should be adjusted once every twelve hours, or as much oftener as necessary, under direction of an officer or non-commissioned officer.

SUPPORTS.

The supports constitute a force upon which the pickets fall back if driven in by the enemy, or with which (in exceptional cases) the pickets may be reinforced. The ground regulates their position, as they should occupy the line of resistance. The position selected should afford a good general line of defense, ground uniformly moderately good being preferable to that which is very strong in some parts and weak in others. The supports should not be too far away from the pickets to render timely aid, nor so close as to be involved in their defeat if suddenly driven in. They should be located as centrally as practicable in reference to the pickets in their front, and should preferably be upon, or near, the main routes by which the enemy might advance. A defile on the road leading from the enemy's position to the camp is generally a good position for a support. Often the best line of resistance lies close to the line of observation, or even coincides with it. In such cases the supports may be close to the pickets or merged with them. One support is generally sufficient for two or three pickets.

The commander of the support should make arrange-

ments with the commanders of the pickets in his front for concerted action in case of attack, and should maintain communication with them, with the neighboring supports, and with the reserve. This communication is generally kept up by means of patrols.

The support must provide for its own immediate safety by sentinels or vedettes, but may relax to some extent the watchfulness exacted from the pickets. The men stack arms and are allowed to remove their accouterments (excepting always the cartridge belt), but they are not permitted to wander away from the post of the support, and must be ready at all times to fall in. They are usually allowed to light fires, and may be required to do the cooking for the pickets as well as for themselves. The horses with the support are kept in the same degree of readiness as those with the pickets. No shouting or unnecessary noise of any kind should be permitted in any part of the outpost.

COSSACK POSTS.

In many cases it will be expedient to replace the pickets and sentinels with a line of Cossack posts, sent out directly from the supports. Each of these posts consists of four men; namely, three reliefs of a single sentinel, and a non-commissioned officer or old soldier for the command of the post. Each support furnishes from four to twelve Cossack posts, which are placed from 300 to 400 yards in advance of it, and from 100 to 300 yards apart; the smaller limits of distance in the case of very close and rugged ground, and the latter in the case of very open ground. The sentinel is stationed from 10 to 30 yards in advance of the post, the other members of which remain concealed and keep him constantly in view. The sentinels are relieved every hour and the post every three

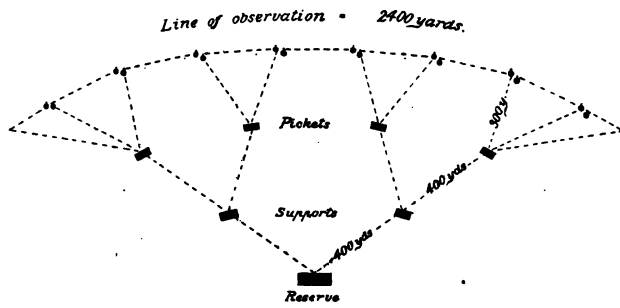
hours. One or two men may be sent from the post, from time to time, to patrol to the post on either side; but, as a rule, all the patrolling is done from the support.

It would seem at first thought that a line of Cossack posts must lack the resisting power of the two lines of sentinels and pickets, and that it should, therefore, be used only when the ground affords strong defensive positions. It is not, however, without many positive elements of strength. The sentinels are more likely to be free from the timidity of loneliness, and to be more resolute in the performance of their duty, when they are closely backed up by a friendly post, than when they are at a considerable distance from a picket. Each post could be intrenched, and should be so stationed as to be able to cross its fire with that of the posts on its right and left. It is reasonable to suppose that the posts could thus hold their own long enough to enable the supports to prepare fully for action. In consideration of these facts and the still more important one that the system of Cossack posts is in thorough keeping with the nature of American warfare, its adoption in almost every case may be safely recommended.*

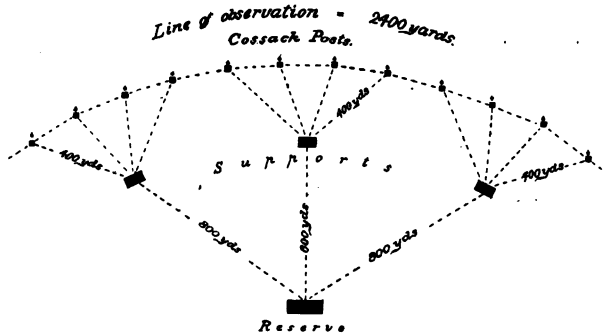
A comparison of the diagrams on Plate VIII. will show the economy of men for outpost duty effected by the use of Cossack posts. In each case the line of observation is 2,400 yards in length. In the first case we have four pickets, each supplying three reliefs for two double-sentinel posts and the

*Notwithstanding the name, Cossack posts are of American origin, and are the outgrowth of our own experience. General Pierron (quoting Baron von Valentini) says: "In the American war (1776-1783), as the *terrain* was extremely wooded and rough, instead of forming the first line of a thin chain of sentinels separated from each other (who could not have been relieved during the night, as the relief would have lost its way in the underbrush), a cordon of small groups was employed, in which one man watched while those who were in turn to relieve him slept. These groups were placed at the edge of the wood and on the roads."—*Méthodes de Guerre*, tome III, 1ere partie, p. 52.

— Figure 1. —



— Figure 2. —



post at the picket. Add three reliefs of (say) four connecting sentinels for the entire line, and we have 72 men; but one-third of the picket consists of patrols, which makes the total for the pickets 108 men. In the second case we will take the same number of connecting sentinels and allow the same number of men for patrols, assigning them, however, to the supports.

We have, then, the following:

<i>Fig. 1.</i>	<i>Fig. 2.</i>
Pickets...108 men.	Cossack posts. 48 men.
Supports..108 men.	Supports..... 96 men.
Reserve...108 men.	Reserve..... 96 men.
<hr/>	<hr/>
Total...324 men.	Total.....240 men.

Adding non-commissioned officers, we should have in the first case about 360 men for the strength of the outpost, and in the second case about 260. In round numbers, we should require four companies (war strength) in the first case and three in the second. This estimate may be regarded as a minimum rather than a maximum.

THE RESERVE.

The reserve forms the general support and pivot of resistance of the whole outpost, and usually consists of all three arms. It should be concealed from the enemy, and should be posted as centrally as practicable, so as to enable it to move quickly to any endangered point. It may sometimes be divided into two parts, to facilitate supporting the more advanced bodies; and it should be upon their principal line or lines of retreat to the main body. Its position may be intrenched and strengthened with obstacles; but, as a rule, it will advance to reinforce the supports or pickets, and the intrenchments should be on the line of resistance.

The same rules obtain, in regard to the men and horses, with the reserve as in the case of the supports. The reserve is allowed to light fires; and in the exceptional cases where fires are prohibited to the more advanced parties, it must do the cooking for them.

In the case of a small force which can prepare quickly for action, or when the main body bivouacs in order of battle, the reserve may sometimes be dispensed with. When the reserve is not needed, its omission greatly relieves the troops from the pressure of outpost duty; but it can rarely be safely omitted from the composition of the outpost. The line of resistance being 3,000 yards from the main body, it is evident that, unless the latter were in a state of instant readiness, the supports might be overwhelmed before they could receive assistance, if there were no reserve. To keep the main body in such a state of readiness would, to a great extent, defeat the prime object of the outpost. In rare cases, where the supports occupy a very strong defensive position, and the main body can be held close at hand sheltered from the enemy's artillery fire, the reserve may be omitted.

No compliments are paid by the outpost; but when a reserve, support, or picket is approached by a general officer, the commander of the outpost, or an armed party, the men fall in in rear of the stacks, ready to take arms. Individual members of the outpost, with the exception of sentinels on post, salute when addressing, or addressed by, a superior officer.

THE OUTPOST AT NIGHT.

The foregoing description of the outpost duties relates principally to the cordon system. If this system were retained at night, it would be necessary either to increase the

number of sentinels greatly, thus adding to the burden of outpost duty, or else to draw in the outpost line closer to the main body, thus contracting the front. The greatest objection to the latter alternative is, that valuable ground would thus be abandoned, which, if the enemy were enterprising, might be regained only at the cost of an engagement. If it can be avoided, the outpost line must never be drawn in at night; but should such a measure become necessary, the position should be resumed again at early dawn, and the outpost should occupy it with as much caution and vigilance as when it was first taken up.

The outpost system of Marshal Bugeaud is generally adopted in its essential features for night. This is based on the idea that in making a night attack, in any but an exceptionally open country, the enemy's movements must necessarily be confined to roads and clearly defined paths. In a close country, movements off the roads can not, in fact, be made by any force larger than a patrol; while in an open country, roads and paths must be followed for guidance, unless the ground is thoroughly known and there is a bright moon. The uncertainty of effecting the necessary combinations at night, and the danger of columns losing their way and not arriving at appointed destinations at the proper time, render night attacks in force very infrequent. They must, however, be carefully guarded against; and partial attacks for the purpose of alarming the outpost, capturing sentinels or pickets, or reconnoitering the position, must be expected.

If, then, double sentinels are placed on the roads and paths, and closely backed up by their reliefs, the advanced posts thus formed will give timely warning of the enemy's approach in force. But the intervening ground must not be neglected, or hostile patrols might push through and recon-

noiter the position. The ground between the sentinels is, therefore, thoroughly patrolled, the number of men available for this purpose being increased by the diminution of the number of sentinel posts. Nothing more than careful observation and warning should be expected of the advanced posts, the duty of resistance falling first upon the pickets, which should be nearer the sentinels at night than during the day, and should be in strong defensive positions on the roads, in rear of the advanced posts furnished by them.

In cavalry outposts the pickets are placed on the roads, double vedettes being pushed out in front. Each picket must be on the alert and prepared to fight on foot. Its position may be strengthened by barricading the road; but care must be taken to leave a passage by which the vedettes may retire, and the barricade must not be so constructed as to prove an obstacle to the advance of the troops in rear.

When the enemy is close at hand and aggressive, it may sometimes be advisable, in addition to barring his advance on the main roads, to post a cordon of sentinels near the camp or bivouac, to check small patrols of the enemy, which might otherwise annoy and alarm the main body and destroy its repose. As a rule, however, patrolling between the advanced posts will be sufficient to check such hostile parties.

All changes in the position of the outpost must be arranged during daylight, and made at late dusk. Even if the cordon system is retained and the line is not drawn in, the positions of the sentinels and pickets should be changed, in order to prevent their possible capture by the enemy, who may have noted their positions during the day. The sentinels, who are habitually posted on high ground during the day, should be moved to lower ground at night, so as to bring an approaching enemy in view on the sky line. As a rule, the sentinels should be pushed forward from the high

ground rather than drawn back, in order to retain possession of the ridge.

The plate given as a frontispiece illustrates the changes made in the position of the outpost at night, and the manner in which the normal formation may be modified to suit the topography. In this case the lines of observation and resistance are coincident, and in case of attack the supports would advance to the line of the pickets. Support C is on the coincident lines, its front covered with Cossack posts. The reserve is necessarily divided, the right portion being in readiness to reinforce supports C and D, and the left portion to reinforce support E. Picket K sends out a detached post N to watch the bridge, and establishes one double sentinel, whose functions are mainly those of a connecting sentinel between the picket and the detached post.

At night, picket K moves close to the detached post at the bridge. Pickets H and I are united and posted at L, sending out a single double sentinel closely backed up by the relief. In a similar way picket G moves to G' and picket F to F'. There are no changes in support C and its Cossack posts. Support D is divided and moves to D' D'. Similarly, support E is divided and stationed at E' E'. It is not usual either to divide or advance the supports, but in this case topographical conditions make it necessary. The same conditions render it advisable to advance the reserve B B to B' B'. It will be observed, however, that the line of resistance is the same as by day, and that the distance from this line to the main body remains the same.

The artillery of the outpost is stationed on the hill P, where it commands every avenue of approach, and is supported by the reserve. The range and direction of the bridges and other important approaches are obtained during the day, and the guns remain in the same position at night.

The extent and direction of the patrolling are indicated in the diagram.

Sandy Creek is fordable with difficulty, and is passable for all arms only at the bridges. Swamp Run is everywhere fordable, but the swamp is impassable.

OUTPOST PATROLS.

The outpost patrols are of two kinds: *visiting patrols* and *reconnoitering patrols*.

Visiting Patrols.—Visiting patrols usually consist of a non-commissioned officer and two or three men. They are sent out from the picket, and keep up communication between it and its sentinels and detached posts, the neighboring pickets, and the support. In making its rounds the patrol first touches upon the nearest sentinel of the picket on its right (or left), and then passes along the front of its own sentinels to the nearest sentinel of the picket on its left (or right), returning by the rear to its own picket. The patrol (especially if composed of cavalry) may often find it expedient, as a means of concealment, to pass in rear of the sentinels. The patrol must see that the sentinels of its picket understand, and faithfully perform, their duties. They examine any suspicious points which the sentinel can not inspect without going too far away from his post; take charge of persons detained by the sentinels, and relieve any sentinel who may be sick or wounded.

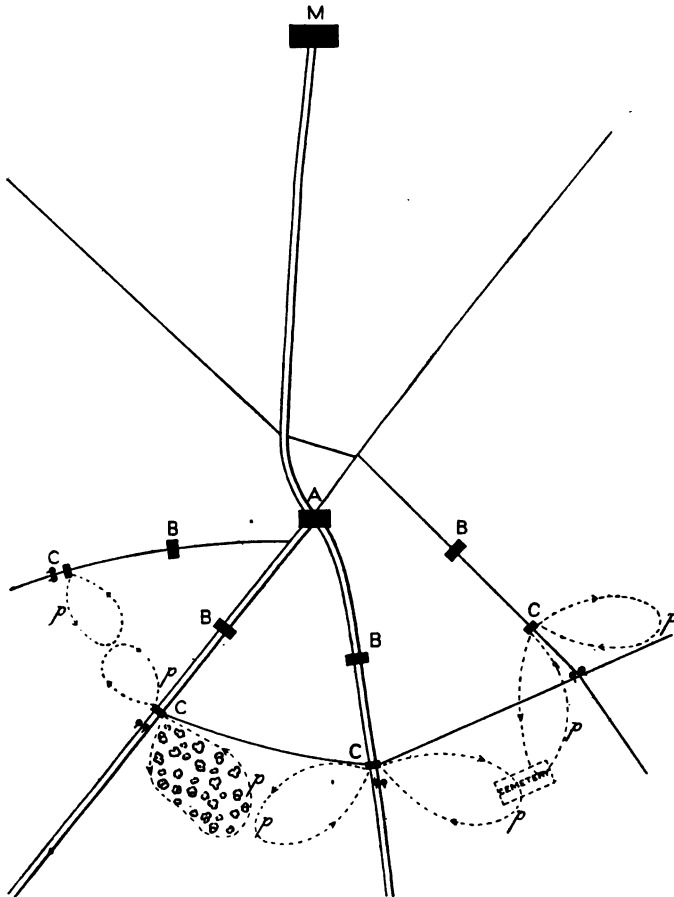
Visiting patrols are mainly used at night. When the sentinels can be seen from the picket, the patrol would not ordinarily make the rounds, during the day, oftener than once each relief. At night, the patrol should not cover a front of more than 500 yards in its operations. When the distance between two advanced posts exceeds this, they should

Patrol System of Outposts.

A Reserve.
 B Support.
 C Picket.
 P Patrol.
 M Main body.
 County road.
 Farm road.

Note:-

Only the lateral patrols are shown in the sketch. Patrols would also be sent to the front on each road.



be visited by separate patrols, which would generally be from different pickets, as posts at so great an interval would rarely be furnished by the same picket. It is seldom necessary for a visiting patrol to examine beyond the line of observation during the day. When it does so, it should not go beyond sight of the sentinels; and at night it should not advance beyond short rifle range. When the picket is weak, the reliefs must be used as visiting patrols.

Reconnoitering Patrols.—The sentinels guard against surprise, but the information they can gain in regard to the enemy is generally very slight. This information must be sought by reconnoitering patrols sent out towards the enemy, to watch his movements, and, if possible, examine his position.

Reconnoitering patrols are either *small* or *strong*. A small patrol varies in size from three men to a squad. If composed of infantry, it should not, as a rule, advance more than half a mile beyond the line of sentinels at night: in daytime it may often prudently advance farther. Cavalry is generally used for this duty by day, and may push out five or ten miles, or even farther, according to the discretion of the patrol commander. The patrol should go far enough to see the enemy's sentinels, if not too distant, and may even penetrate his line of observation.

It is a good rule to use at night the patrols that have scouted the same region by day. The time, direction, and manner of sending out patrols must be constantly varied, in order that the enemy may not be prepared to cut them off. A small patrol must constantly bear in mind that its business is not to fight, but to observe. It should accordingly be careful to avoid engagements, unless ordered to take prisoners. Its duty is most efficiently performed when it comes back with valuable information without having been seen by the enemy.

Patrolling Posts.—At night the advanced posts in front

of the pickets may be replaced by patrolling posts of four men each. The patrolling posts are small patrols sent out at dusk along all the avenues by which the enemy might approach. The commanders of these patrols should be selected with care, and should be hampered with as few restrictions as possible; usually receiving general instructions to patrol a certain road to a certain distance. The distance will depend upon circumstances; but it should always be such that information of the enemy's approach may be sent back in time to enable the picket and support to be ready to receive him. When the distance is greater than 1,000 yards, the patrolling post might better be composed of cavalry. If composed of infantry, a mounted orderly should accompany it.

The patrolling post must not leave the road or path assigned to it; but it may either keep moving or remain stationary at the limit of the distance to which it is ordered to patrol. In the latter case a sentinel or vedette is posted, and the rest of the patrol remains near at hand and well concealed. The sentinel should be relieved every half-hour, and the patrolling post every three hours. The relief moves out from the picket, along the designated road or path, until it comes upon the patrolling post. As the picket itself must generally be constantly on the alert at night, the only object in relieving the patrolling posts is to make an equitable division of a hazardous duty. If the number of patrolling posts is such as to weaken the picket materially, the support must be moved up close enough to it to render prompt assistance; or, if this can not be done without abandoning a strong position for a weaker one, the support must send reinforcements to the picket, and draw corresponding reinforcements from the reserve. The members of the patrolling post must preserve the strictest silence, and must not under any circumstances smoke or light fires; for the safety of the post de-

depends upon the darkness, silence, absence of fire, and the enemy's ignorance of its location.

Strong Patrols.—When strong patrols are sent out from the outpost, they are generally taken from the support or reserve. They vary in size from nine men to a company or troop; and if composed of less than two squads, may be taken from a picket. As a rule, the movements of a strong patrol are not so cautious as those of a small one. Its object is to gain information that can not be acquired by sentinels or small patrols. If composed of infantry, it rarely goes more than a mile and a half from the line of sentinels, and it should have one or two mounted men with it to insure the rapid transmission of intelligence back to the outpost. If a post of the enemy is discovered, the patrol will generally endeavor to remain concealed in observation of it, sending back information of anything important that may be noted; but a strong patrol may sometimes be used offensively to discover the enemy's position or intentions by attacking a post. Patrols of the enemy must be kept back, and may be attacked, especially for the purpose of capturing prisoners; but, as a rule, the patrol avoids firing, and endeavors, as far as possible, to see without being seen.*

If the patrols return without reporting anything, vigilance must not be relaxed; for it is possible for patrols to take a wrong direction, or to pass close to the enemy without discovering him. On the afternoon before the battle of Shiloh, General Prentiss sent a force, consisting of three companies of the 21st Missouri Infantry (Col. Moore), to reconnoiter in his front. They followed a line oblique to the front of the camp, which led them to the right, in front of Sherman's line. After marching three miles, they returned to camp, and reported that they had seen nothing. Had they

*For the conduct of patrols, see the next chapter.

moved direct to the front, they would have struck Hardee's Confederate corps.

As a rule, patrols are frequent; and when the enemy is in force and close at hand, they are constant.

POSTING AND RELIEVING THE OUTPOST.

The men detailed for outpost duty should have a proper supply of ammunition, and (when practicable) one day's cooked rations. Their canteens should be filled with coffee, or, if cooking is to be allowed, with water. Each officer should have a watch, compass, field-glass, memorandum pad and lead-pencil; and, if possible, he should be provided with a topographical map of the ground to be occupied by the outpost. Every non-commissioned officer should have a lead-pencil and a small memorandum pad.

The troops detailed having been inspected, and the subordinate officers having taken down in writing the instructions of the outpost commander (if time admits), the force moves out, with an advance guard, to take up the designated positions. The reserve and supports may each march independently from camp directly to its position; or they may march together and be detached from the column at suitable points. Each body moves to its position covered by a point and flanking groups, and the pickets especially move with extreme vigilance. When the picket is halted, slightly in rear of the selected line of observation, several squads are deployed as skirmishers, with sufficient intervals to enable their front to cover approximately the front of the sentinels of the picket, and are pushed forward cautiously to reconnoiter, being followed by the first relief of sentinels. If it should be impracticable to use a sufficient number of skirmishers to cover the front of the sentinels without too great

an extension of intervals, several small patrols should reconnoiter the ground in front. The picket commander halts on the line of observation, and the skirmishers move on to reconnoiter in its front, not going farther than 100 yards if the country is close or wooded. When the relief comes up, the picket commander posts the sentinels quickly, the posts afterwards being changed as may be required. Any tree, building, haystack, or other object affording a good view should be occupied at once as a lookout by two men, one of whom should, if practicable, be provided with a field-glass. As soon as the sentinels have been tentatively posted, the skirmishers or patrols are recalled and sent back to the picket; after which the picket commander touches upon the nearest sentinel of the picket on his right (or left), and passes along his own line of observation to the nearest sentinel of the picket on his left (or right). He assures himself that his sentinels are in positions best suited for observation and concealment, sees that the number of posts does not exceed the requirements of efficient observation, and then returns to his picket. He next posts the picket sentinel and such connecting sentinels as may be necessary, sends out such detached posts as may be requisite, details a portion of the picket for patrolling (dividing the men thus detailed into patrols numbered consecutively), orders the picket to stack arms and fall out, and sends to his immediate commander a report of his position and dispositions, accompanied, if practicable, with a rough sketch of the same.

If Cossack posts are established instead of pickets and sentinels, the force on leaving the supports deploys first into line of squads, and then into line of skirmishers, taking such intervals as to cover the front to be occupied. On halting on the line of observation, such reconnaissance to the front as may be necessary is effected, and the skirmishers are then

assembled by squads. Numbers 3 and 4, front and rear rank, of each squad are then marched half way to the next squad on their left, and halted. Each group of four men then constitutes a Cossack post.

A cavalry picket is posted in a manner similar to the method of posting one composed of infantry. If the country is open, the picket remains mounted during the posting of the vedettes; if the country is wooded and close, it is prepared to fight on foot. When the picket commander returns to the picket, the men are allowed to dismount; or, if prepared for fighting on foot, they are assembled and stand to horse. The horses are then placed under a proper guard, and the men fall out.

After the picket commander has sent in his first report, he visits his detached posts, and makes such inspection of the ground as may be necessary to familiarize him with the roads, paths, and other topographical features of his position, but should not go beyond reach of his picket. If streams or other obstacles exist in front of his position, he ascertains at what points they are passable; and he must satisfy himself that the picket occupies a post fulfilling, as far as possible, the requirements already set forth. He takes such measures in regard to strengthening his position as may be required by circumstances and be in consonance with orders received by him; but while he should make all prudent preparations to defend the main avenues of approach, bridges, fords, etc., he should not obstruct a main road with obstacles whose removal might delay the advance of the main body, nor destroy bridges, without orders from higher authority. He must be especially careful to see that the picket post at night is prepared for a stubborn defense; and he must, at all times, consider what he would do in case of attack. "Though by nature he be slow of thought, he has nothing to fear, provided

he has made up his mind beforehand as to what he will do when attacked.”*

When, at the close of a day's march, the advance guard forms the outpost, the advance party furnishes the pickets and sentinels (being reinforced, if necessary, from the support until the two bodies are equal in strength); the support furnishes the supports; and the reserve constitutes the reserve of the outpost. When the place for camp or bivouac is selected, the advance guard marches to its post as an outpost in the same general manner as though detailed from camp.

Whenever practicable, the outpost should be divided into three equal parts, which should so relieve each other as to make an equitable division of the duty on the line of observation. At the end of each eight hours the reserve should take the place of the support, the support should relieve the pickets, and the latter should march back and unite at the position of the reserve. This arrangement would give each sentinel two hours and forty minutes on post (which might be divided into two periods of an hour and twenty minutes each) during his tour of outpost duty. If, for any reason, this method of equalizing the duty should be impracticable, a careful roster of sentinel duty, and especially of night duty, should be kept, and the burden should be equalized in the course of several tours. To equalize the burden of sentinel duty as advised above, it might sometimes be expedient to change the typical formation as given in Plate VI., so as to have one entire battalion in each line; though such a change is open to the objection that, in case of attack, it would be difficult to avoid an intermingling of the different battalions.

*Wolseley.

THE DEFENSE OF THE OUTPOST.

The outpost should, as a rule, avoid unnecessary movements tending to bring on an engagement; but if attacked, it should resist stubbornly, in order to give the main body time to prepare for action. The chief resistance is generally made on the line of supports, though in some cases it may be best for the supports to advance to the line of pickets. In the former case, the picket usually deploys as skirmishers, and advances to reinforce the line of sentinels; the whole line then falling back slowly upon the supports, taking advantage of every defensive feature of the ground, and fighting resolutely. In order that the fire of the support may not be masked, the pickets will direct their retreat upon its flanks, instead of falling directly back upon it. The skirmishers then form on a line with the skirmishers of the support. In the latter case the pickets should be intrenched. The sentinels fall back upon them, moving towards their flanks to unmask their fire; and the supports are brought up and deployed in the intervals between the pickets. In either case, the reserve is brought up to reinforce the troops in front, as soon as the nature and direction of the attack become apparent.

In case the enemy is repulsed, the infantry should resume its former positions, but should not ordinarily pursue. The cavalry should send out patrols to discover where the enemy halted. These patrols should beware of ambushade, and must not push beyond an indicated distance. When the outpost is composed of infantry alone, small detachments deployed as skirmishers may sometimes be sent in pursuit, but the outpost must not be much weakened for this purpose. Soon after the repulse of the attack, the pickets and supports should shift their positions (unless by so doing it would be necessary to abandon strong points), in order to deprive the

enemy of profiting by the knowledge of the position gained by attacking.

When knowledge of the enemy's approach is gained in time to admit of full preparation, he should be received with volleys. This would enable the officers to keep the troops better in hand, and would have a desirable moral effect on the enemy, as volleys may be regarded as an indication of coolness and readiness on the part of the troops delivering them.

The pickets should be under arms an hour before daybreak, as an attack is most likely to occur at dawn.

RELIEVING THE OUTPOST.

The outpost is relieved at daybreak, in order that there may be double strength on the outpost line at the time when an attack is most to be feared.

The new reserve marches to the post of the old one, where both rest with arms stacked, and the new commander receives from the old all information possessed by the latter in regard to the enemy, and the standing orders for the reserve. Each support marches to the post of the support which it is to relieve, and both supports rest, while information and orders are turned over as in the case of the reserves. When a new picket arrives to relieve an old one, each stands at ease while the new and the old commanders visit the sentinels' posts together, followed by the first relief from the new picket. The old commander points out to the new the important topographical features of the vicinity, and the known or suspected positions of the hostile posts; and gives him all the information that has been gained in regard to the enemy.*

*There is a complete absence of ceremony in relieving an outpost. There is no position prescribed for the new reserve, supports, or pickets. They rest solely to avoid fatigue, and the pickets stand at ease merely to insure silence.

When the old sentinels and detached posts have been relieved, the commander of the old picket (unless there appears to be danger of an attack) sends in a written report to the commander of the outpost or section, and marches his picket back to its support. As soon as the support has been joined by its pickets, it marches back to its reserve, and the entire old outpost returns to camp; or each support may march directly back to camp as soon as it is joined by its pickets. If, while the old outpost or any part of it is returning, the enemy should attack, it must be at once marched back to the assistance of the new outpost.

As a rule, outposts should be relieved every twenty-four hours. With cavalry this is necessary; but in the case of infantry, if the enemy is not near and enterprising, it may sometimes be advisable to keep the same troops on outpost duty for forty-eight hours, if the command remains in camp.

If the army is on the march, the outpost will be relieved as soon as the advance guard has passed the chain of sentinels. The pickets will not, as a rule, fall back to the supports, but will join them at some designated point on the line of march, in order to save the fatigued men from unnecessary marching. The reserve follows the rear of the column, and the supports and pickets, united at designated rendezvous, form the rear guard of the column.

If the army is retreating, the outpost each day (when practicable) forms the rear guard. The manner of relieving the outpost in this case is considered in the chapter on Rear Guards.

CHAPTER IV.

RECONNAISSANCE.

How can any man decide what he should do himself, if he is ignorant of what his enemy is about?—*Jomini*.

It is an easy matter to criticise military operations after the event; but it should be borne in mind that the conditions and relative positions of the opposing forces, always set forth with clearness by a good historian, are matters of doubt to the commanders while the operations are in progress. The curtain that separates the players in the game of kriegsspiel is an apt symbol of the veil of uncertainty which hangs between two opposing armies. To screen his own movements and positions, and to gain a knowledge of those of his opponent, a commander must depend mainly upon reconnoitering bodies; and upon the zeal, daring, prudence, and skill of these bodies, the intelligence and promptness with which their reports are collated, and his own power of making correct deductions or synthetical conclusions from separate facts reported, must in a great measure depend his chances of success.

Reconnaissance may be considered under the following heads:

1. Reconnaissance in force.
2. Special reconnaissance.
3. Patrolling.

Reconnaissance in Force.—Reconnaissances in force are made only by the orders of the Commander-in-Chief, and the force employed generally consists of all three arms. They are often made just before an action, for the purpose of dis-

covering the enemy's strength and dispositions, and frequently lead to a battle. The reconnaissance is conducted in the same general manner as a regular attack. Artillery is brought into action for the purpose of drawing the fire of the enemy's guns and thus discovering their position. The outposts are attacked, and, if possible, driven in, and different parts of the enemy's line are threatened, or actually attacked, by skirmishers in strength according to the result desired. Efforts are made while driving in the enemy's pickets to capture prisoners. Staff officers, advancing with the skirmishers, rapidly sketch the different features of the enemy's position, and note his apparent strength at different points.

Prisoners captured in a reconnaissance in force should be questioned as to the regiments, brigades, divisions, etc., to which they belong. If prisoners have been captured all along the line, their answers will discover the enemy's positions and strength. Even if the prisoners should be uniformly stubborn and untruthful, their regimental badges would convey valuable information.

Cavalry and horse artillery are especially valuable in a reconnaissance in force, as they can be withdrawn from action more easily than infantry; and it would be well to limit the reconnaissance to these two arms when they are in ample force, and circumstances render their action sufficient. To be successful, however, a reconnaissance in force should impose upon the enemy the belief that he is encountering a real attack; and this consideration will determine the kind of troops to employ and the hour at which the attack should be made. If infantry be employed in the attack, it will be hard to break off the action; but if it be not employed, it will generally be manifest that the attack is not serious. As to the time of making the reconnaissance, if it be made late in the afternoon, the troops may be withdrawn under cover of the

darkness; but if made at that hour, the enemy will probably suspect the true nature of the operation. If made in the morning, the enemy will doubtless believe it to be a serious attack; but it may very easily precipitate a battle.

It is evident, therefore, that a reconnaissance in force is a difficult operation. Indeed, it should never be made except when other means of getting necessary information about the enemy fail. It is open to three serious objections:

1. It often results in committing the troops so completely to action as to bring on a battle through the necessity of bringing up other troops to their assistance.

At Wörth a reconnaissance by the 20th Prussian Brigade developed the enemy; and the other German troops "moving to the sound of the cannon," precipitated a battle a day earlier than the Crown Prince had intended.

2. The withdrawal of the troops in pursuance to the general plan of the reconnaissance may often present the appearance of defeat.

In 1859 Giulay caused a reconnaissance in force to be made by Stadion's Corps. It developed Forey's Division near Montebello; and although the Austrians withdrew in accordance with the plan of reconnaissance, the moral effect of the action on both sides was that of a victory of a French division over an Austrian army corps.

On July 18, 1861, McDowell ordered Tyler to observe with his division the roads leading from Centerville to Bull Run, but not to bring on an engagement. Tyler exceeded his instructions by making a reconnaissance in force; and, though he succeeded in developing the enemy's front in the vicinity of Blackburn's Ford, his left flank was turned by the Confederates, he was forced to fall back, and the apparent defeat had a depressing effect upon the raw troops composing the Union army.

3. It is always a costly means of gaining information. The Atlanta campaign, conducted mainly in a heavily wooded country, where the opposing forces, though always near, were often completely concealed from each other, furnishes numerous examples of reconnaissances in force, which were generally very costly ones. These reconnaissances were termed *demonstrations*, and were usually made by a continuous line of considerable extent. In advancing, the army was always covered by a line of skirmishers, which on halting became a line of sentinels. When a demonstration was ordered, the sentinels advanced, thus becoming again a line of skirmishers, and were supported more or less by the troops in rear according to the earnestness of the demonstration.

On June 22, 1864, in order to ascertain the presence and position of Johnston's army at the base of Kenesaw Mountain, a demonstration was made in front of the 2d Division of the IV. Corps. The 97th Ohio Infantry (Lieutenant-Colonel Barnes), operating in front of the 2d Brigade of that division, encountered the enemy in a strong position, and suffered the severe loss of 98 killed and wounded (including 7 officers) out of a total strength of 369—a heavier loss than it incurred in any of the great battles in which it was engaged during the war.*

Special Reconnaissances.—Reconnaissances of this class have some limited and definite object in view: to discover

*The reconnaissance in front of the 1st Brigade, made, at the same time, by the 24th Wisconsin Infantry (Major MacArthur), furnishes an exception to the general rule of severe losses on special reconnaissance. The men of this regiment were instructed each to select a tree about 50 yards in front of the line, and, at command, to run forward and halt behind the tree selected. The regiment, thus pushing forward by a series of rushes, advanced three-fourths of the distance separating it from the enemy, developed his position, and completely gained the object of the reconnaissance, with the loss of only two men killed and eleven wounded. This happy adaptation of tactics to the *terrain* enabled the reconnaissance on this part of the line to be made with an exceptionally small loss.

whether a certain point is occupied in force by the enemy; whether a bridge is broken, or a defile is fortified; to capture a picket, with a view to gaining information; or to attack a post for the purpose of discovering the intentions or morale of the enemy. In the latter case, the inference to be drawn is that the post is of much or little importance, or that the enemy is confident or dispirited, according to its stubborn defense or quick abandonment. The post might, however, be abandoned solely because of its lack of support by other parts of the line. Thus the abandonment of the Turkish posts at Balaklava at the first attack was evidence neither of the unimportance of the posts nor of the impaired morale of the defenders, but it was an indication that the dispositions of the Allies were extremely faulty. Though this was not a case of reconnaissance, but of the real attack the same result might occur in a special reconnaissance.

The manner of conducting a special reconnaissance depends upon its object and the circumstances under which it is conducted. A good rule in one case might be a fatal guide in another. The following instance of a brilliant and successful special reconnaissance shows how the alert intelligence and personal daring of a commander of a reconnoitering party may solve a problem for which no rule can be prescribed:

In the spring of 1863, the First Cavalry Division, Army of the Potomac, was ordered to make a reconnaissance towards Orange Court-House, to develop the position and strength of the enemy on the Rapidan; other troops, infantry and cavalry, being detached on similar duty towards other points of the enemy's line. When the cavalry division arrived at the Rapidan, it discovered a weak line of Confederate outposts and a long line of earthworks; but was unable to ascertain whether the latter was occupied, especially as

orders discouraged any considerable engagement or "the sacrifice of men." To induce the enemy to show his force, various expedients were resorted to, but without result. It was finally determined to cross the stream at the ford in front, and the advance squadron (5th U. S. Cavalry) moved towards the crossing. The line of advance gave, at points, a view of the interior of the enemy's line, which seemed to indicate that it was held by a strong force. Acting with prompt resolution, the squadron commander (Captain Ash) quickly placed his men behind cover near by, and rode alone along the bank of the river at a rapid gallop, looking into the enemy's works. A furious fusillade from the earthworks followed his movement; but he succeeded in making a complete inspection, and, waving his hat triumphantly over his head, rode back to his command, loudly cheered by the forces on both sides of the river, the Confederates mounting their breastworks and waving their hats in admiration of the gallant exploit. Thus the object of the reconnaissance was gained without the loss of a man.

In an attempt upon a picket of the enemy, the most favorable place for crossing his line of sentinels is sought out, and the necessary dispositions are made, before dark; the attack being made at night or at late dusk. The force should ordinarily be divided into two detachments, one of which should remain concealed and ready to rush forward to the assistance of the other if necessary. The latter endeavors to cross the line of sentinels unperceived, advancing silently, in close order, without flankers, and with only one or two scouts in advance. As soon as the line of sentinels is passed, the greatest difficulty is overcome. The detachment moves quickly upon the picket so as to attack it on the flank and rear. It is imperative that the attack should be prompt and impetuous, and made simultaneously from two or more di-

rections. The great object of the attack is, of course, to capture prisoners, with a view to obtaining information from them. The prisoners are hurried away, and the reconnoitering force makes its retreat without delay.

The force employed in a special reconnaissance varies in size from a company or troop to a division. The dividing line between a special reconnaissance and a reconnaissance in force is often very dim, and in many cases the same operation could be designated by either term. On the 4th of July, 1864, Sherman being in doubt as to the presence of Johnston's army at Smyrna Camp-Ground, Howard ordered a demonstration, which he describes as follows:

"I called Stanley, whose division held the front. 'General, double your skirmishers and press them.' At once it was done. The lines sped forward, capturing the outlying pits of the enemy, and took many prisoners; but a sheet of lead instantly came from the hidden works in the edge of the wood beyond us, and several batteries hurled their shot across our lines, some of them reaching our grove and forcing us [Sherman and Howard] to retire."*

This demonstration may with equal correctness be termed either a reconnaissance in force or a special reconnaissance. The force employed would justify the former term, and the limited and special object would render the latter proper.

Patrolling.—Patrols are divided into *small* patrols and *strong* patrols. A strong patrol varies in strength from nine men to a troop of cavalry or a company of infantry. A small patrol varies from three men to a squad. A patrol should never consist of less than three men; for if it were composed of only two, it would be impossible to send back a report of anything seen or heard, without leaving one man alone, without support, in the proximity of the enemy.

*"Battles and Leaders of the Civil War," Vol. IV., p. 313.

In our service patrols are also classified as *officers'*, *reconnoitering*, *visiting*, *covering* (flanking), and *connecting* patrols.* To these may be added *exploring*, *harassing*, *expeditionary*, and *pursuing* patrols. The classification into small and strong patrols is the important one; for without changing its size, and without material modification of its methods, the patrol may combine the functions of several of the different kinds of patrols contained in the second classification. In fact, the latter classification is mainly for convenience of description.

Officers' patrols are extensively used in connection with the cavalry screen, and will therefore be considered in the next chapter. Visiting patrols have already been considered; they belong exclusively to outposts.

Exploring patrols have for their object to explore the country in front of the army. The nature of this exploration and the manner of conducting it belong rather to "Military Topography" than to the subject here considered; but the following observations of different natural features should always be made, and it may not be out of place to mention them here:

Roads.—Their direction; their nature (macadamized, corduroy, plank, "dirt," etc.); their condition of repair; their grade; the nature of lateral roads, and the points where they leave the main road; their borders (woods, hedges, fences, or ditches); the places at which they pass through defiles, across heights or rivers, and where they intersect railroads; their breadth (whether suitable to column of fours or of platoons, etc.).

Railroads.—Their direction; the number of tracks, stations, and junctions; their grade; the nature of the cuts, embankments, and tunnels.

Bridges.—Their position; their width and length; their

*Cavalry Drill Regulations, par. 978.

construction (wood, brick, stone, or iron); the roads and approaches on each bank.

Rivers (and other Streams).—Their direction, width, and depth; the rapidity of the current; liability to sudden rises and extreme fluctuations in depth, as indicated by drift-wood, etc.; fords; the nature of the banks; kind, position, and number of islands at suitable points of passage; heights in the vicinity and their command over the banks.

Woods.—Their situation, extent, and shape; whether clear or containing underbrush; the number and extent of "clearings"; whether cut up by ravines, or containing marshes, etc.; nature of roads penetrating them.

Canals.—Their direction, width, and depth; condition of towpath; locks, and means for protecting or destroying them.

Telegraphs.—Whether they follow railroads or common roads; stations; number of wires.

Villages.—Their situation (on a height, in a valley, or on a plain); nature of the surrounding country; construction of the houses; nature and width of the streets; means of defense.

Defiles.—Their direction; whether straight or crooked; whether heights on either side are accessible or inaccessible; nature of ground at each extremity; width (frontage of column that can pass through).

Ponds and Marshes.—Means of crossing; defensive use that might be made of them as obstacles against the enemy; whether the marshy grounds are practicable for any or all arms.

Springs and Rivulets.—Nature of approaches; whether water is drinkable and abundant.

Valleys.—Extent and nature; towns, villages, hamlets, streams, roads, and paths therein; obstacles offered by, or in, the valley to the movements of troops.

Heights.—Whether slopes are easy or steep; whether good defensive positions are offered; whether plateau is wide or narrow; whether passages are easy or difficult; whether the ground is broken or smooth, wooded or clear.

Cultivated Ground.—Nature of cultivation and kind of crops.

Good camping-places should always be noted.

The report should be rendered as quickly as possible after the return of the patrol, accompanied, when practicable, with a map.*

A patrol of any nature should endeavor to note carefully the different features of the ground over which it passes, whether required to make a report or not. *In every case a railroad embankment, a ditch, or any other object that would furnish a good defensive position, should be noted.*

Reconnoitering patrols are used to reconnoiter the position and watch the movements of the enemy.

Harassing patrols are for the purpose of disturbing and annoying the enemy, and thus depriving him of sleep and rest.

Expeditionary patrols have for their mission the capture of sentinels or patrols, or the destruction of roads, railroads, or telegraphs.

Connecting patrols are used to preserve communication between columns of troops on the march or between different bodies in battle.

Pursuing patrols hang upon a retreating enemy, and render prompt information as to his movements, location, and morale.

*For a complete and excellent description of the requirements of the kind of reconnaissance here considered, see "The Duties of the General Staff," by Bronsart von Schellendorf, Vol. II., p. 249, *et seq.* For technical information in regard to sketching and map-making in connection with such reconnaissance, consult Root's "Military Topography."

Exploring, reconnoitering, harassing, expeditionary and pursuing patrols may be either strong or small; connecting patrols are always strong.

Cavalry is the arm *par excellence* for patrolling, especially when (as is the case with American cavalry) it unites mobility and defensive power, and does not need to be hampered with a supporting force of infantry. The composition of the patrol will, however, depend upon the ground to be reconnoitered, the distance to which the reconnaissance is to be extended, and the hour at which the patrol is sent out. The union of infantry and cavalry is recommended by some military writers; but such a measure seems of doubtful value in any case, and worse than useless when the cavalry can take care of itself with its own fire action. Infantry is preferable to cavalry for patrolling only at night, or in a very close and broken country. It is often advisable to attach a few troopers to an infantry patrol merely as mounted orderlies, but no further union of the two arms on this service should ordinarily be contemplated.

SMALL INFANTRY PATROLS.

The conditions under which small infantry patrols are sent out differ very much. If possible, the following rules should be observed:

Composition.—Experienced soldiers should be detailed, and if no non-commissioned officer is available, an intelligent private should be selected to command the patrol, and the others ordered to obey him. It is desirable that at least one member of the patrol should be able to speak the language of the country in which the army is operating.

Preparation and Inspection.—The patrol commander should be given clear and definite instructions in regard to

the duty to be performed, and he should be required to repeat them to the members of the patrol in the presence of the officer giving them. These instructions should inform him of the object of the reconnaissance, what is known about the enemy, the nature of the ground to be reconnoitered, whether he is to reconnoiter in one direction or in several, how long he is to remain out, where his reports are to be sent, and, if other patrols are sent out at the same time, the particular route which he is to follow. For instance—

Captain (to sergeant of patrol): Do you know the country in front?

Sergeant: No, sir.

Captain: Well, you see that hill half-a-mile out—the road forks there. Small parties of the enemy are suspected in that vicinity. Move out and observe the fork and the open fields to the left. Don't reconnoiter the ground at the right of the fork; another patrol will take care of that. If you see this patrol, don't mistake it for the enemy. Remain out until dark. Report to me at No. 2 Picket. Don't fire unless you have to.

The patrol commander must be *sure* that he understands his instructions. If he has the slightest doubt about it, he must ask for a repetition.

He then inspects the patrol, being careful that each man has the proper amount of ammunition, and that none are sick, intoxicated, or foot-sore. If any man has a cold which causes him to cough, he must be replaced by another man, even though he be not on sick-report. The patrol commander also sees that the arms and accouterments of his men are so arranged as neither to rattle nor to glisten in the sunlight. He also points out to the members of the patrol the positions of troops of their own army, and a place of assembly for men who may be detached or become separated from the patrol,

choosing, if practicable, some prominent landmark. He next gives the men their general instructions, cautioning them especially that they must neither talk nor smoke, and explains, if they be not already familiar with them, the signals by which they are to communicate.

Signals.—In addition to the signals described in the Drill Regulations, the following should be used:

Attention, or, Do you see anything? Wave the hand across the face, or whistle once.

Affirmative signal: Raise and lower the arm vertically twice, or whistle twice.

Negative signal: Extend the arm horizontally thrice, or whistle thrice.

Enemy in sight or hearing: Hold the rifle horizontally above the head with both hands, holding it steadily if the enemy is in small bodies, and raising and lowering it repeatedly if he is in force. To signal by whistle, whistle four times.

To ask for reinforcements: Extend the arm horizontally and wave it rapidly with a circular motion, or give a long, continuous whistle.

In a very close country, in foggy weather, or at night, the whistle must be relied upon, but at all other times its use should be avoided. In giving the signals, the whistle must be used softly, as a loud noise might be heard by the enemy. In every case, except when asking for reinforcements, the note should be short. If the men are not provided with whistles, they should give the whistle signals by mouth. Many different signals may be devised, such as waving the hat or handkerchief, striking the butt of the piece with the knuckles, etc. No signals should be made unnecessarily, and when near the enemy the greatest care should be exercised that the signals be not detected by him.

Formation.—The disposition of the patrol while on the

march can not be definitely prescribed. The patrols should have the general formation of main body, advance guard, rear guard, and flankers, even when each can be represented by only one man. If the patrol consists of less than five men, the rear guard or one or both flankers may be dispensed with; but the advance guard should always be retained. It is generally better to do without one, or even both, of the flankers than without the rear-guard man, whose vigilance prevents the patrol from being attacked in the rear and cut off. On nearing the enemy, the patrol should generally extend in line to facilitate observation. Figures 1 to 6, Plate X., give typical formations of a small patrol.

It must be borne in mind that these typical formations are merely hints, the formation of the patrol always depending upon its object, the nature of the ground, and the character and position of the enemy. The only definite rule that can be laid down is the following: *The patrol must always be so formed as to facilitate the gaining of information, and to insure, if possible, the escape of at least one man, if the patrol should be cut off. Any disposition that complies with this rule is right.*

The distances and intervals between the members of the patrol depend upon circumstances. They are rarely less than twenty-five or more than one hundred yards. The men should be close enough to see and hear each other's signals, and for mutual support. On the other hand, they should not so crowd together that the patrol could not see more than a single man could—a fault to which men are prone through anxiety about being cut off. The commander should not lose sight of the point, and the other members should keep the same man in view; or, in the case of a large patrol, or one on an extended front, each man should endeavor to keep in sight the man next him towards the point. The point should, when

PATROLS.

— *Fig. 1.* —



— Fig. 2. —

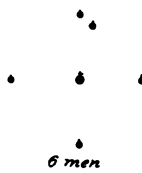


— Fig 3 —



Distances and intervals vary from 25 to 100 yards according to circumstances.

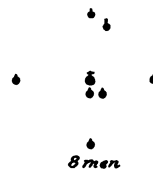
— Fig. 4. —



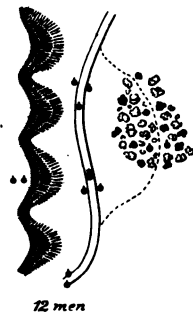
— Fig 5. —



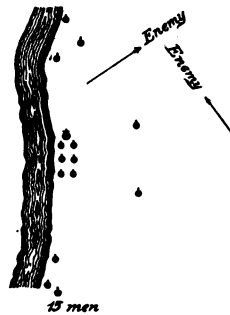
— Fig 6 —



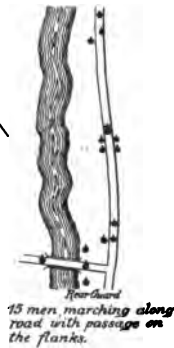
— Fig 7. —



— Fig. 8. —



— *Fig 9.* —



practicable, consist of two men, in order that one may scout vigilantly towards the enemy while the other watches for signals from the men on the right and left and from the commander. The signals from the other members of the patrol are generally transmitted to the commander through the point. To assemble the patrol, the commander signals to the point to halt, and moves up to it, followed by the rear-guard man. The other men at once close in on the point, conforming their pace to that of the commander.

Conduct of Patrol.—The patrol moves cautiously, *but not timidly*, along hedges, walls, ditches, ravines, etc., seeking in every way to see without being seen. It halts frequently to listen, and to make careful observation of the ground. At each halt the men should note their bearings relative to certain landmarks, and the commander should frequently turn about to observe the general appearance of the landscape and note particular objects, in order that he may not lose his way even if compelled to make a hasty retreat. It may be well in some cases to mark the route by blazing the trees, fastening wisps of straw to posts, or marking the path by dropping small stones; but such methods are open to the objections that they take time and might betray the trail of the patrol to the enemy.*

It is advisable for a patrol to return by a different route from the one followed on advance, if it be practicable for it to do so, as it thus extends its reconnaissance and lessens the danger of being cut off; but a small patrol rarely goes more than three-quarters of a mile beyond the force which sends it out, and in this limited distance it does not often have a choice of more than one road.

Generally, the patrol should avoid moving on great roads

*These methods have, however, the sanction of such good authorities as Shaw and the *Guide Manuel du Chef de Patrouille*.

and entering villages and inhabited places. But this does not mean that observation of great roads is to be neglected. On the contrary, they are the very ones that should be most carefully watched; for they are the routes that must be followed by any bodies of the enemy whose movements are really worth reporting. The patrol, while moving across fields and along such objects as have been already mentioned, should endeavor to keep a constant watch on the great roads. Inhabited places should be turned and carefully observed, but should not ordinarily be entered by a small patrol. At night, or in a fog or snow-storm, the patrol must of necessity move on the great roads, in order to avoid losing its way, unless it is moving over ground with which it is perfectly familiar.

The patrol should not halt to rest before its return, unless circumstances render it imperatively necessary to do so. In such case it should rest in concealment in some place which offers advantages for defense, and from which a retreat can be easily effected. In the case of a small patrol, the latter consideration is the more important. The position chosen should not be near any habitation. During the day it should be on high ground, from which an extensive view may be obtained; at night it should be on low ground, so as to bring approaching people into view on the sky-line.

If another patrol of the same army, or any other friendly force, is met, the patrol commander should exchange information with it, and inform himself of its strength, its destination, and the name of its commander, in order that he may report the same on his return. Friendly patrols should recognize each other without noise; but at night, the one that first discovers the other must challenge and demand the parole and countersign.

Encountering the Enemy.—The patrol should exercise the utmost vigilance from the moment of its departure; but, un-

less it has received orders to return immediately upon discovering hostile troops, its real work begins when it touches upon the enemy. If a small hostile patrol is discovered, it is generally better to remain in concealment than to attack; for the noise of combat might cause enough mischief to more than counterbalance all that could be gained by defeating the hostile patrol, even if prisoners were captured. If the patrol is discovered by the hostile patrol, and finds itself unable to escape without fighting, it should attack boldly, and should endeavor to take prisoners.

When a hostile patrol has penetrated so far as to make it probable that it has gained important information, an attempt should be made to ambuscade and capture it. If surprised, a patrol should fight resolutely, unless the enemy be in such force as to make resistance hopeless. In the latter case, or if defeated in any case, the patrol should disperse, each man making his way back to the rendezvous designated beforehand. It should then, after uniting, continue its reconnoissance, sending one man back to the command with a report. It should be an invariable rule not to quit the reconnoissance until some result has been obtained. If the enemy is near at hand and in force, the patrol must open fire, and keep up a lively fusillade in retreat, as the only means of giving prompt warning of impending danger.

If, notwithstanding its prudence, the patrol falls into an ambuscade, it should boldly attack; for courage and coolness may wrest success from the most adverse circumstances. If a sentinel or patrol of the enemy is suddenly encountered in the dark, no answer should be made to his challenge, but the patrol should remain halted and silent. The enemy may think himself mistaken and pay no further attention.*

*The following remarkable instance is mentioned by Dufour: "At the siege of Luxembourg, Vauban, wishing to ascertain, by personal observation, the real condition of affairs, as was his custom, ad-

If the challenge is repeated, the patrol should sneak away as quickly as possible, unless it has orders to capture prisoners, in which case a sudden rush upon the sentinel might enable the patrol to overpower him and carry him off before he could receive assistance. If some members of the patrol can speak the language of the sentinel, they may succeed in completely allaying his suspicions with a plausible answer to his challenge.*

Inhabitants.—Whenever the approach of people is signalled, the patrol remains concealed in observation. If they prove to be civilians coming from the direction of the enemy, they should be questioned carefully, as they may sometimes give valuable information. They should be asked whether they have seen any of the enemy's soldiers; where they were, what they were doing; whether they were infantry, cavalry, or artillery; whether they were regular troops or militia; what kind of uniforms they wore; whether the horses and men were in good condition, or seemed to be worn out and fatigued; how the troops of the enemy behaved themselves; how the road leading to the enemy is situated, and its condition; whether the enemy has scouting parties out; whether he seems to be vigilant; whether he has taken any guides from the village, etc. Ignorance is more likely to be encoun-

vanced under the escort of a few grenadiers, who were left in rear lying upon the ground. He was crossing the glacis alone, under cover of the twilight darkness, when he was discovered. He beckoned with his hand to the sentinels not to fire, and continued to advance instead of retiring. The enemy took him for one of themselves, and Vauban, having seen what he wished, retired slowly, and was saved by his admirable coolness."

*When, in the retreat from Moscow, Eugene was executing his perilous march across Milaradowitch's front, under cover of the darkness, the moon suddenly emerged from a heavy cloud, and at the same moment a Russian sentinel challenged. A Polish officer with the French ran up to the sentinel, and coolly said to him, in Russian, in a low tone: "Be silent! don't you see that we belong to the corps of Ouwaroff, and that we are going on a secret expedition?" The sentinel, thus assured, kept quiet. (Ségur.)

tered than untruthfulness, and even information given sincerely will probably be more or less inaccurate. Military terms should be avoided when questioning country people. It is best to ask them when the enemy's troops began arriving, when they all got in, etc., and thus get *data* from which to compute the enemy's strength; for the estimates of country people as to the numbers of a military force are almost sure to be worthless. In a report, dated Gettysburg, June 30, 1863, General Buford says:

"I entered this place to-day at 11 a. m. Found everybody in a terrible state of excitement on account of the enemy's advance upon this place. He had approached to within half a mile of the town when the head of my column entered. His force was terribly exaggerated by reasonable and truthful but inexperienced men."

Rumors among the inhabitants of important movements by the enemy should not be discarded as worthless because of their seeming improbability, but should be investigated with care. When, in 1859, Napoleon III. was following the Austrians in their retreat to the Mincio, a French officer on reconnaissance was informed by an old peasant woman that the enemy was advancing. Her story was ridiculed, as the Austrians had been retreating for a number of days, and it was known that they had withdrawn across the river. Nevertheless, the apparently absurd report was strictly true, for the Austrians had retraced their steps, and the two armies met the next day in the great battle of Solferino.

News travels by word of mouth with incredible rapidity; and though it is always more or less distorted, and may, indeed, be grossly exaggerated, it generally has a kernel of truth which is well worth seeking. Von der Goltz is authority for the statement that the country people in the neighborhood of Metz had news of the march of MacMahon to the re-

lief of Bazaine at a time when the movement was still in embryo, and days before the great battles around Sedan had been fought.* "Something," says the same author, "can always be learned; and it is by no means necessary that the country-scouring patrols should succeed in finding traitors to give important information. Each person, when asked, will, in order to put an end to the cross-questioning that is annoying him, prefer to say only what appears to him to be unimportant. But from a hundred unimportant things one important piece of news may be composed."

Questions formulating a statement to which the person questioned may answer yes or no, should be avoided. The questions should be such as to draw out a narrative from the person interrogated. It should always be borne in mind that the questions asked may be repeated to the enemy, and the questioner must, therefore, be careful so to frame them that they will not give a key to his designs. When several persons are questioned, they should be examined separately.

The matter of questioning civilians, employing guides, and examining prisoners, is more applicable to cavalry than infantry patrols, and to strong rather than small ones. This seems, however, to be the most convenient place to consider these subjects, and, in fact, they are applicable to all patrols.

People going in the direction of the enemy should be

*It is well known that among the North American Indians news is carried by word of mouth with great rapidity. In 1876 the first news of Custer's defeat was received at the headquarters of the Department of Dakota, St. Paul, Minn., ten days after the battle, this news having come overland to the mouth of the Big Horn River, thence by steamer down the Yellowstone and Missouri rivers to Bismarck, from which point it was sent by telegraph. The day before the receipt of this news at Department Headquarters, Lieutenant John B. Rodman, the adjutant of the 20th Infantry, stationed at Fort Snelling, near St. Paul, was informed of the battle by Waumadaka-Wanich, an old Mendota Indian, who stated that all the soldiers had been killed. Within nine days the news of the battle had been conveyed by the Indians, by word of mouth, from the Little Big Horn River to the Mississippi, a distance of more than 700 miles, measured in an air-line.

halted, and never allowed to proceed, unless they have undoubtedly genuine passes from proper authority. If they are contumacious, they must be threatened, and sometimes roughly handled. It may be necessary in some cases to tie them to trees or posts, or even to gag them or threaten them with death if they cry out; but it should be an invariable rule never to resort to harsh measures when gentler means will secure the same end.

Guides.—If it be necessary to take a guide from among the people of the country, he should be kindly treated, but warned that he will pay with his life the penalty of treachery. The degree of intelligence and education possessed by the guide will decide the measures proper to employ with him; but he must always be carefully guarded, and must not be discharged until there is no longer danger of his betraying the patrol. No one but the commander should communicate with the guides, and the soldiers should not, under any circumstances, be allowed either to chaff or threaten them. Drovers, peddlers, livery-stable employés, and country doctors will generally be the best guides. If a man can be found who has served as a guide to the enemy, so much the better. Many people, in order to escape service as guides, will declare that they know nothing about the country. If they appear to be intelligent, it is best to take them along in spite of their pretended ignorance, if better guides are not manifestly available, and keep them until their want of knowledge seems to be more than a sham.

Reconnaissance of Different Kinds of Ground.—The manner of reconnoitering different kinds of ground depends mainly upon the circumstances of each individual case, and no rigid rule can be prescribed. There are, however, certain general methods of reconnoitering various places, which may be given as the result of centuries of warfare, and which are,

in some respects, common to the armies of the most enlightened nations and the warriors of savage tribes.* The following suggestions are offered; but the student must bear in mind that each case presents its own problem, to be solved according to its own circumstances.

Whenever possible, the men composing the patrol should keep under cover. If there is a bank or cover of any kind parallel to the line of march, they will keep it between them and the supposed position of the enemy. If the different features affording cover lie perpendicular to the line of march, the patrol will halt a moment behind each, peer cautiously about, and then pass rapidly to the next, the men moving one at a time, stooping and running. No country is so open that small folds of ground affording some degree of concealment can not be found.

Cross-roads.—When the patrol comes to a cross-road, two men should be sent along it on each flank until they come to the first turn, the patrol halting. If the men see nothing suspicious, they return, and the patrol pushes on. If anything suspicious is seen, one man rushes back quickly to the patrol, while the other remains in observation. If the patrol is very small, two men should be sent first to one side and then to the other, in preference to sending a single man in each direction.

Heights.—If the patrol is large enough to admit of detaching them, one or two men climb the slope on either flank, keeping in sight of the patrol if possible. In any case, one man moves cautiously up the hill, followed by the others in single file at such distance that each can keep his predecessor in view.

Defiles.—If time permits, the heights on either side

*For remarks upon the methods of scouting in use among the Indians, see Chapter IX.

should be reconnoitered by flankers before the patrol enters the defile. If the heights are inaccessible, or time is urgent, the patrol pushes through, in single file, at double time, the distance being the same as in ascending a hill. The same method should be adopted in reconnoitering a railroad cut or sunken road.

Bridges or Fords.—The front of the patrol is contracted so as to bring all the men to the passage. The patrol then crosses rapidly, and takes up a proper formation. A bridge is first examined, to see that it is safe and has not been tampered with by the enemy.

Woods.—The patrol enters in skirmishing order, the intervals being as great as may be consistent with mutual observation and support on the part of the members of the patrol. On arriving at the farther edge of the wood, the patrol should remain concealed and carefully look about before passing out to the open ground. When there is such a growth of underbrush as to make this method impracticable, a road through the wood must be reconnoitered as in the case of a defile, though not usually at double time. If in this case a cross-road is found in the wood, the patrol must be assembled and the lateral road reconnoitered (see "Cross-roads") before passing beyond it.

Inclosures (Gardens, Parks, Cemeteries).—The leading patrollers first examine the exterior, to make sure that the enemy is not concealed behind one of the faces of the inclosure. They then proceed to examine the interior. Great care should be taken in reconnoitering and entering an inclosure, as an imprudent patrol might find it a veritable trap.

Houses.—When a house or farm-building is approached by a patrol, it is first carefully reconnoitered from a distance, and if nothing suspicious is seen, it is then approached by two men, the rest of the party remaining concealed in ob-

servation. If the patrol is large enough to admit of it, four men approach the house, so as to examine the front and back entrances simultaneously. Only one man enters the door, the other remaining outside to give the alarm, should a party of the enemy be concealed in the house. The patrol should not remain in the vicinity of the house any longer than necessary, as information relative to its numbers and movements might be given to the enemy, if a hostile party should subsequently visit the place.

Villages.—If the village is seen to be in possession of the enemy, the patrol must be content with reconnoitering it from the outside. If the presence of the enemy is not apparent, the patrol should enter the village, being disposed in any way conforming to the general rule. A formation suitable in many cases would be in single file at proper distances for observation and support, each man being on the opposite side of the street from his predecessor. The patrol should push through the village as rapidly as possible; and when it has reached the opposite side, two of the party might be detached, if expedient, to reënter the village to seek further information, the rest of the patrol remaining in some position affording good observation and secure retreat.

If the patrol is strong enough, it should seize the post-office, telegraph office, and railroad station, and secure all important papers that may be there. If the patrol is part of an advance guard, it should seize the mayor and postmaster of the place, and turn them over to the commander of the vanguard with the papers seized. It must not be supposed that only the official papers are of value. Information of great importance is sometimes obtained from private letters from officers or soldiers. Though the writer may give merely what he deems items of friendly gossip, and though he may have but slight knowledge of the military operations, his corre-

spondence may convey valuable news in regard to the bodies of troops with the army, what commands have arrived, what troops have departed, and the direction that they have taken. Above all, it is likely to convey a fairly accurate idea of the morale of the army. On Lee's retreat from Richmond, the capture of a letter written to a Southern lady by her son, who was an officer in the retreating army, gave Sheridan proof of the despondency of the Confederates and their belief that their army was ruined.*

At night, a village must be even more cautiously approached by a small patrol than by day. The patrol should glide through back alleys, across gardens, etc., rather than move along the main street. If a light is seen in a window, two of the men should approach, look in, and listen. If there are no signs of the enemy, they should knock and make inquiry. If no light is seen, and it seems imprudent to rouse any of the people, the patrol must watch and capture one of the inhabitants, and get from him such information as he may possess.†

The best time for a patrol to approach a village is at early dawn, when it is light enough to see, but before the inhabitants are up.

Cities and Towns.—It is dangerous in the extreme for a small patrol to enter a village, unless it is certain that it is not occupied by the enemy; for the men could be easily shot down by a fire from windows, cellarways, etc., or entrapped and captured. As a rule, cities and large towns should not be entered by a small patrol, but should be merely watched from the outside.

Reconnaissance of Enemy in Position.—The patrol endeavors to ascertain the direction and extent of the line of obser-

*"Sheridan's Memoirs," Vol. II., p. 178.

† Von Mirns.

vation, how its flanks are supported, the positions of the sentinels, their number, the number of pickets, the places where the line may be penetrated with the least risk of discovery, the strength of hostile patrols, and the routes taken by them. It is also of great importance to ascertain whether good roads extend laterally behind the enemy's pickets, as such roads could be used by a force sent out to capture them. If the enemy's line of sentinels is penetrated, the patrol may, perhaps, approach near enough to the picket to overhear the countersign and parole; but it must be certain that the advantage to be gained is worth the risk, as the patrol will be in great danger of capture. If a point can be found on the flank of the enemy's position from which a view of his dispositions in rear of the line of sentinels can be obtained, the commander of the patrol endeavors to gain such point, and, concealing his patrol near at hand, makes careful observation. The best time for such observation is at daybreak, and the selected point should be gained before dawn, so as to enable the patrol to observe the relieving of the outpost. The longer the patrol remains, the more it will see, but the greater will be its danger of being discovered. The patrol commander should have sufficient courage to remain long enough to gain valuable information, and sufficient prudence to withdraw in time to escape capture.

If any important movements are observed, such as the withdrawing of the sentinels, the changing of their positions, preparations for advance or retreat, etc., the patrol commander sends a man back at once with a report of what has been seen.

Reconnaissance of Enemy on the March.—If the enemy is on the march, the patrol should conceal itself close to the hostile column, but far enough away to escape discovery by the enemy's flankers. Conspicuous places should be avoided,

even if at some distance from the column, as they would probably be carefully searched. The best place is a ditch or wallow, which will conceal the patrol and not be visible even at a short distance. The patrol carefully observes the progress of the column, noting its breadth of front, its rate of march, and the time it takes to pass a given point. A given point is passed in one minute by about 200 infantry in column of fours; by about 150 cavalry in fours at a walk, or, if in rear of the infantry, by about 100; by about 260 cavalry in fours at a trot, and by about 4 guns if in rear of infantry. If the whole column can be seen, and its length can be ascertained by the known distance between any two points which it passes, its strength can at once be estimated by allowing one yard for every two infantry soldiers, one yard for each cavalry soldier, and twenty yards for each gun or caisson. An allowance of from one-fourth to one-half must be made for opening out, depending upon the state of the roads and weather and the discipline of the troops composing the column. Reports will be sent in, from time to time, by the commander of the patrol, who will not hesitate, if necessary, to send back his last man with a report.

Signs and Trails.—The patrol must carefully watch for all signs and trails of the enemy, as information of the greatest value is thus sometimes obtained. The different indications to be looked for are almost innumerable. The following are among the most important:

If boats in great number are seen assembled on the bank of a stream, it is an indication of preparation to cross. If they are found burned, it is an indication of retreat. If important bridges are found broken, it is a sign of a long retreat. If at some distance above the point where we are preparing to throw a bridge, large boats heavily laden with stone are found, it is an evidence of the enemy's intention to destroy the bridge and oppose the crossing.

If at night the flames of the enemy's camp-fires disappear and reappear, something is moving between the observer and the fires. If smoke as well as flame is visible, the fires are very near. If the fires are very numerous and lighted successively, and if soon after being lighted they go out, it is probable that the enemy is preparing a retreat and trying to deceive us. If the fires burn very brightly and clearly at a late hour, the enemy has probably gone, and has left a detachment to keep the fires burning. If, at an unusual time, much smoke is seen ascending from the enemy's camp, it is probable that he is engaged in cooking preparatory to moving off.

The rumbling of vehicles, cracking of whips, neighing of horses, braying of mules, and barking of dogs often indicate the arrival or departure of troops. The braying of mules is an almost infallible indication of arrival instead of departure. If the noise remains in the same place, and new fires are lighted, it is probable that reinforcements have arrived. If the noise grows more indistinct, troops are probably withdrawing. If, added to this, the fires appear to be dying out, and the enemy seems to redouble the vigilance of his outposts, the indications of retreat are very strong.

The whistling of locomotives within the enemy's lines should be carefully noted. One long whistle generally denotes arrival, and two short ones, departure. If after the arrival of a railroad train hurraing is heard, it is probable that reinforcements, a commander of high rank or great popularity, or much-needed supplies have come in. Hurraing is generally an indication that the troops are in good morale. The indications furnished by the whistling of locomotives and the hurraing of troops may, however, easily be a ruse, and corroborative or contradictory indications should be carefully sought. The noise of heavy explosions is generally

an indication of the destruction of supplies by the enemy, preparatory to a retreat. If in addition to such explosions, large fires are seen, the indications of retreat amount almost to a certainty.

The noise made by a strong column on the march is distinct and continuous; that of a small body, feeble and interrupted. The distance at which the noise of marching can be heard depends upon the nature of the ground marched over, the direction of the wind, and the presence or absence of other sounds. On a calm night, a company of infantry, marching at route step on a hard road, can be heard at a distance of 500 or 600 yards; a troop of cavalry at a walk, 600 or 700 yards; a troop of cavalry at a trot or gallop, artillery, and heavy wagons, 900 or 1,000 yards.

The dust raised by the march of a column furnishes an indication not only of the direction of the march, but the strength and composition of the column. When infantry is marching, the dust is low and thick. With cavalry, the dust is higher; and as this arm moves rapidly, the upper part of the cloud is thinner and disappears more quickly than in the case of infantry. The clouds of dust raised by artillery and wagons are unequal in height and disconnected. Hence, by noting the length of a line of dust and the intervals in it, the strength and composition of the column may be estimated. The effect of the wind in dissipating the dust must, however, be taken into consideration.

If the reflection from the weapons of marching troops is very brilliant, it is probable that the troops are marching towards the observer; otherwise, it is presumable that they are marching in the other direction. If the rays of light slant from left to right downwards, the troops are marching to the observer's right; if the rays slant from right to left downwards, the column is marching to the observer's left.

A man with good vision should be able, on a clear day, to distinguish objects on the sky-line as follows:

At a distance of 9 to 12 miles, church spires and towers.

At a distance of 5 to 7 miles, windmills.

At a distance of 2 to $2\frac{1}{2}$ miles, chimneys of light color.

At a distance of 2,000 yards, trunks of large trees.

At a distance of 1,000 yards, single posts.

At 500 yards the panes of glass may be distinguished in a window.

Troops are visible at 2,000 yards, at which distance a mounted man looks like a mere speck; at 1,200 yards infantry can be distinguished from cavalry; at 1,000 yards a line of men looks like a broad belt; at 600 yards the files of a squad can be counted, and at 400 yards the movements of the arms and legs can be plainly seen.

The larger, brighter, or better lighted an object is, the nearer it seems. An object seems nearer when it has a dark background than when it has a light one, and closer to the observer when the air is clear than when it is raining, snowing, foggy, or the atmosphere is filled with smoke. An object looks farther off when the observer is facing the sun than when he has his back to it. A smooth expanse of snow, grain-fields, or water makes distances seem shorter than they really are.

Optical illusions are not uncommon, and must be guarded against.

The trail of the enemy furnishes excellent means of gaining information about the direction, strength, and composition of his column, and sometimes even of the object of his march. If the ground is evenly trodden, the column was composed of infantry alone. If there are many prints of horse-shoes, the column also contained cavalry. If the wheel tracks are deep and wide, artillery was in the column. Each

arm was more numerous in proportion to the number and plainness of its indications. If the trail is fresh, the column has recently passed. If the trail is narrow, the troops felt secure, as they were marching in column of route; if broad, they expected an action, as they were marching in column of platoons or companies, ready to deploy. If the fields on each side of the road are cut up with many tracks, the cavalry marched on the flanks of the column, and the enemy was pushing on with his troops well in hand for action. A retreating army makes a broad trail across fields, especially before the rear guard is formed and the retreat is regularly organized. This indication was strangely ignored just after the battle of Salamanca, when Wellington, thinking that the retreating French were making for the ford of Huerta, proceeded thither in person with his left wing, failing to note that he was marching through standing grain where no enemy could have preceded him. The French retreated upon Alba without molestation, and Wellington found nothing at Huerta.*

Indications of a camp or bivouac are found mainly in the remains of camp-fires. These will show, by their degree of freshness, whether much or little time has elapsed since the enemy quitted the place, and the quantity of cinders will give an indication of the length of time he occupied it. They will also furnish a means of estimating his force approximately, the nature of the weather and the supply of fuel being considered. In cold weather an allowance of ten men to each fire will give a rough estimate of the strength of the force; while in warm weather the fires are generally limited to the requirements of cooking, and rarely exceed one to each company. Other valuable indications in regard to the length of time the position was occupied and the time when

*Napier's "Peninsular War," Book XVIII., chap. 3.

it was abandoned may be found in the evidences of care or haste in the construction of huts or shelters, and in the freshness of straw, grain, dung, or the entrails of slaughtered animals.

Abandoned clothing, equipments, or harness will give a clue to the arms and regiments composing a retreating force. Dead horses lying about, broken weapons, discarded knapsacks, abandoned and broken-down wagons, etc., are indications of its fatigue and demoralization. Bloody bandages lying about, and many fresh graves, are evidences that the enemy is heavily burdened with wounded or sick. Graves which seem to have been made with much care are probably those of officers of rank. A head-board at a new grave may sometimes give valuable information.

The manner and bearing of the inhabitants in a hostile country should be carefully noted. If they are gloomy and anxious, it is an indication of a want of confidence in their cause, or that their troops are distant. If they are excited and insolent, it is an indication that their army is strong and near, and that they anticipate success. If they are friendly and pleasant in their demeanor, it is probable that the war is not popular, and that the government lacks cordial support.

Reports.—Reports should be sent in whenever anything of importance is seen, or anything happens which should be known by the officer who sent out the patrol. Trivial matters should not be reported; but if there is a doubt as to the importance of something seen or heard, a report should be made; for it is better to report an insignificant matter than to let one of great moment go unheeded.

Reports may be either verbal or written. If a verbal report is sent in, it should be intrusted to an intelligent man, and he should be required to repeat it before starting, so as to be sure that he understands it. The man who carries the

report should, if possible, himself deliver it to the officer for whom it is intended. If the country is dangerous and carefully watched by the enemy, the same report should be sent in by several men, each taking a different route. In this case a verbal report is better than a written one, as the enemy can not get possession of it by capturing the bearer, and the report of each man will be a check upon the accuracy of the others.

The indispensable qualities of a written report are scrupulous accuracy as to facts, simplicity, clearness of diction, legibility of handwriting, and correct spelling of proper names. Surmises should never be given as facts, and the person making the report should carefully separate what he himself knows from what has been told him by others. Brevity is desirable, but not at the price of obscurity: a report should not be expressed ambiguously in ten words when it can be stated clearly in twenty. When the spelling of proper names does not correspond with their pronunciation by the people of the country, their phonetic spelling should also be given in parentheses. Thus: "The enemy is reported in force at Saguache (Siwash), and we have seen small hostile parties on the Cebolla (Savoya)." * Foreign or peculiar proper names should be written in detached letters or "printed"; thus, P e t i t c o d i a c ., S h u b e n a c a d i e .

A convenient form of report (reduced to one-fourth size) is given on page 142.

If practicable, the commander of the patrol should be furnished with a pad of printed order blanks similar to this model. The receipt should be signed, torn off, and given to the bearer of the report as his voucher for its delivery. A report, either written or verbal, should invariably be made whenever the patrol returns.

*These names will be recognized by officers who have served in Southwestern Colorado.

SECURITY AND INFORMATION.

SENDING DETACHMENT	LOCATION	DAY	MO.	HRS. a. m. or p. m.	MIN.
RECEIVED,					
To					
Detachment No.			Report No.		
Received	Hr.	Min.	M.,	189....	
(Name)					
(Rank).....					

STRONG INFANTRY PATROLS.

The foregoing principles are nearly all quite as applicable to strong patrols as to small ones—some of them more so. The limits of the strength of a strong patrol have already been given. The strength of a strong patrol should always be proportionate to the object to be effected by it and generally to the distance it is to go. It should neither be so weak as to be obliged to retire before small parties of the enemy, nor so strong as to attract attention. The object for which the patrol is sent out should be distinctly specified, and the commander should be provided with a good map, by means of which he may select his route. But if he chooses his route by map, it is none the less imperative that he pay

careful attention to the various features of the ground (not always clearly indicated by the best maps), with a view to utilizing them in approaching the enemy, in avoiding him, in retreating, or in defense.

The larger the patrol, the less secret are its movements, and the more nearly does its formation correspond to that of a column on the march, or a line deployed for action, as the case may be. As a rule, at least half the strength of the patrol should be in the main body; but its point, flanking, and rear groups each constitute a small patrol, and are each guided by the principles already laid down for the conduct of a small patrol, modified by their dependence on the main body. A strong patrol may extend its reconnaissance farther than a small one; being careful, however, not to go so far as to incur unnecessary risk of being cut off by the enemy. It is generally practicable for it to return by a different route than the one by which it advances; as the extent of its operations is usually such as to give a choice of several roads.

Some typical formations of a strong patrol are given in the last three figures on Plate X. Figures 7 and 8 explain themselves. In Figure 9 the men detached to reconnoiter and guard the bridge would ordinarily be sent out from the point, their places being taken, at double time, by men from the main body of the patrol. The patrol moves slowly, or halts if necessary, while the bridge is being reconnoitered. After the patrol has passed on, the detachment follows as rear group, the former rear group closing up to the main body of the patrol at double time. The detachment may in some cases be left to guard the bridge.*

Expeditionary Patrols.—These are generally strong patrols, though in some cases the object in view may be better

*This explanation of Fig. 9 must not be understood as a rule; it is merely a suggestion as to the method which *might* be adopted.

attained by small ones. The object of an expeditionary patrol is always a special one, and the operations of a force of this kind generally differ from a special reconnaissance only in the size of the force employed.

If the object in view is the capture of a sentinel, the patrol should ordinarily be a small one. A sentinel is chosen whose post can apparently be easily approached, who appears to be isolated, and who, as far as can be judged, is not in plain sight of his picket. The patrol cautiously steals up close to the sentinel's post, being extended as circumstances may require, and, upon a pre-arranged signal, rushes forward, and endeavors to surround the sentinel and seize him before he can fire. Even if he fires, the patrol can probably run him off before he can receive assistance, if he has been surprised.

If the object is the capture of a patrol, the expeditionary force should be a large patrol. It must prepare an ambuscade, or take up a position such that it can surround the enemy's patrol, or at least cut off its retreat. If the opposing patrol is equal or superior in numbers, the attack must be a surprise, must be audaciously pushed, and the surviving members of the enemy's party must be hurried away before they can be succored by their friends.

In all cases when a large patrol is charged with the capture of prisoners, its commander must seek a place of observation for himself and a place of concealment for his men; the two places being either coincident or near each other. He then waits until one or a small party of the enemy draw far enough away from their camp or column to be beyond the reach of prompt assistance, and waylays or gives chase to them. In these expeditions the prime object is to bring in the prisoners, and harsh measures to hasten their march are excusable.

Prisoners are a most valuable source of information. In

his description of the battle of The Wilderness, General Humphreys says that an examination of prisoners during the night of May 5, 1864, drew from them the statement that Longstreet was expected to be up in the morning to attack the Federal left, and that his force was about 12,000 men. Hancock was thus enabled to prepare to receive the attack which Longstreet made the following morning.*

"Napoleon often complains, in his 'Correspondence,' of the lack of accurate news of the enemy because of the absence of prisoners. He frequently enjoins the cavalry corps, and notably Murat, to neglect no means of capturing them. This shows the extreme importance which he attached to information obtained from prisoners. The most favorable moment for questioning prisoners is when they have just been captured. They are then agitated and have not sufficient self-control to deceive.

"The longer the questioning is postponed, the more evasive and studied will their answers become. Their answers at the place of capture may to a certain extent be verified. Such is not the case after the lapse of some time and in another place. The prisoners are questioned at once by one of the officers of the detachment which captures them. Their replies are written down and transmitted with the prisoners to the Department of Intelligence, where they are questioned more at length."†

Prisoners have very different values. It is more desirable to capture an officer than an enlisted man; an officer of high rank rather than a subaltern; a staff officer ‡ rather than

*"The Virginia Campaign of '64 and '65," page 37.

†*Leval, "*Tactique des Renseignements*," Tome I, p. 88.

‡ The term "staff officer" is here used in what the author conceives to be its proper sense—i. e., an officer of the Adjutant General's or Inspector General's Departments, or one belonging to the staff of a general officer.

a line officer. In brief, the object should be to capture those who are likely to possess the most extended information. It is to be remarked, however, that those who possess the most complete information will generally be the ones most skillful in concealing it. If enlisted men are captured, they should be questioned in regard to their regiments, brigades, and divisions; the length of time they have been in the position; whether their rations are satisfactory; whether certain commanders are popular and have the confidence of their men; whether there are many men on sick report; what news has lately been received in camp, and what the rumors are—in brief, all questions calculated to elicit information in regard to the enemy's position, movements, and morale. If tact be exercised in questioning, much information may be gained; for the prisoner will probably consider the questions as prompted merely by natural curiosity.

When the object is the destruction of roads, railroads, or telegraphs, the expeditionary patrol should generally be a large one; but in some cases a small patrol may answer the purpose better, as it can move to its destination more secretly, and the use of high explosives gives it a great destructive power. In any case, the patrol should endeavor to reach its objective unseen, and part should be on the alert watching the enemy while the rest of the men are engaged in the work of destruction.*

A patrol may be sent out to gain information by "tapping" a telegraph line. In this case, a telegraph operator, using a small pocket instrument, taps the line and learns the messages passing over it. The rest of the men, carefully concealed, look out for the enemy. An expeditionary patrol for the purpose of tapping a telegraph line is generally a cavalry

*For the method of destroying railroads, telegraphs, bridges, etc., see Beach's "Manual of Military Field Engineering."

patrol, sent out from the cavalry screen or from a raiding column. In addition to learning the enemy's movements, the operator can often give him false information—order him to concentrate on wrong points, and work mischief to him generally.

Harassing Patrols.—These patrols are generally strong; for, their object being not to seek information, but to annoy the enemy, they must be prepared to fight. In some cases, however, better results may be obtained by reducing the size and increasing the number of the patrols. When an army halts in a position to await reinforcements, or because of the irresolution of its chief, the opposing commander (even if his army be inferior in numbers) may often raise the morale of his own troops, and impair the courage and efficiency of those of his adversary, by causing frequent alarms, destroying the enemy's rest; compelling the hostile outposts repeatedly to rush to arms, and exciting their sentinels to such a degree that they fancy a foe in every shadow, and imagine a hostile attack in every rustling leaf. The method of operating with a harassing patrol will depend upon circumstances, but in every case the attack should be of the nature of a surprise. If the patrol is small, the enemy's sentinels should be shot down or captured in a noisy rush. If the patrol is large, the attack should be made upon the enemy's pickets; the object being the creation of alarm and the infliction of loss rather than the capture of prisoners. If many small harassing patrols are employed, strong patrols should be sent out, from time to time, to make vigorous attacks on the pickets; as the enemy would otherwise find it sufficient merely to redouble the vigilance of his sentinels and patrol to the front. The method of attack should be continually changed, and the point selected, the size of the assailing force, and the hour of attack should all be variable.

Jackson's defense of New Orleans furnishes an illustration of the effective use that may be made of harassing patrols. Between the night battle of December 23, 1814, and Pakenham's defeat sixteen days later, the British were incessantly annoyed by small parties of Americans.

"The plain between the two hostile camps was alive day and night with small parties of foot and horse, wandering to and fro in pursuit of adventure, on the trail of reconnoiterers, stragglers, and outpost sentinels. After a while there grew up a regular science in the conduct of these modes of vexing, annoying, and weakening the enemy. It was as follows: A small number of each corps, being permitted to leave the lines, would start from their position, and all converge to a central point in front of the lines. Here they would, when all collected, make quite a formidable body of men, and would proceed to attack the nearest British outpost, or advance in extended lines, so as to create alarm in the enemy's camp, and subject them to the vexation of being beaten to arms, in the midst of which the scouting party would be unusually unlucky if it did not succeed in 'bagging' one or two of the enemy's advance sentinels. In such incessant scouting parties and volunteer operations a majority of Jackson's command were engaged during the greater part of the night. So daring were these attacks that on more than one occasion the six-pounders were advanced from the lines and drawn within cannon shot of the outposts, when they would be discharged at the sentinels or any living object, generally with some effect, and always with great terror to the British camp, causing a general apprehension that the Americans were advancing to attack them in full force."*

Flank Patrols.—These are always strong patrols, and

*This description is condensed from Walker's account, quoted in Parton's "Life of Andrew Jackson."

usually operate on roads parallel to the line of march of the main body. They reconnoiter defiles, farms, woods, etc., at some distance from the flanks of the main column. They usually consist of from ten to twenty men (but may contain the maximum strength of a patrol), and are generally detached for a specific reconnaissance, with orders to rejoin the main body at a designated rendezvous, when the object of the reconnaissance has been gained. The patrol should be guided by the general principles already laid down for patrols, and should avail itself of every practicable opportunity of communicating with the main column.

Flanking patrols of the maximum strength are often detached from a marching column to reconnoiter and guard roads crossing the line of march during the passage of the main body. They are sometimes called *covering patrols*. The forces employed on this duty are, however, generally larger than patrols, and are covering detachments charged with the duties of a containing force.

THE ADVANCE GUARD PASSING THROUGH A TOWN.

Having discussed the details of patrolling, we may now consider the manner in which an advance guard would pass through a town.

On approaching the village or town, the advance guard halts, and the advance party moves forward to reconnoiter; the point, well in advance, acting as already prescribed for a small patrol. If the enemy's presence is suspected, the village must be turned by a portion of the advance party or support, and entered simultaneously by the front and flank. If, on the contrary, all seems well, the point signals to the rear and advances up the principal street, the advance party,

following at a suitable distance, its flankers working up the side streets, always keeping up communication with the advance party and with the flank patrols—if there be any. The support follows at a suitable distance, the reserve remaining at the edge of the village until the patrols have gone through. If the point discovers that the village is occupied by the enemy, it falls back quickly and quietly to the advance party, whose commander immediately sends information to the rear. The support at once comes up, and the commander of the support, in the case of a large advance guard, or of the advance guard, in the case of a small one, makes dispositions for a reconnaissance of the village, with a view to ascertaining the most practicable point for forcing it.

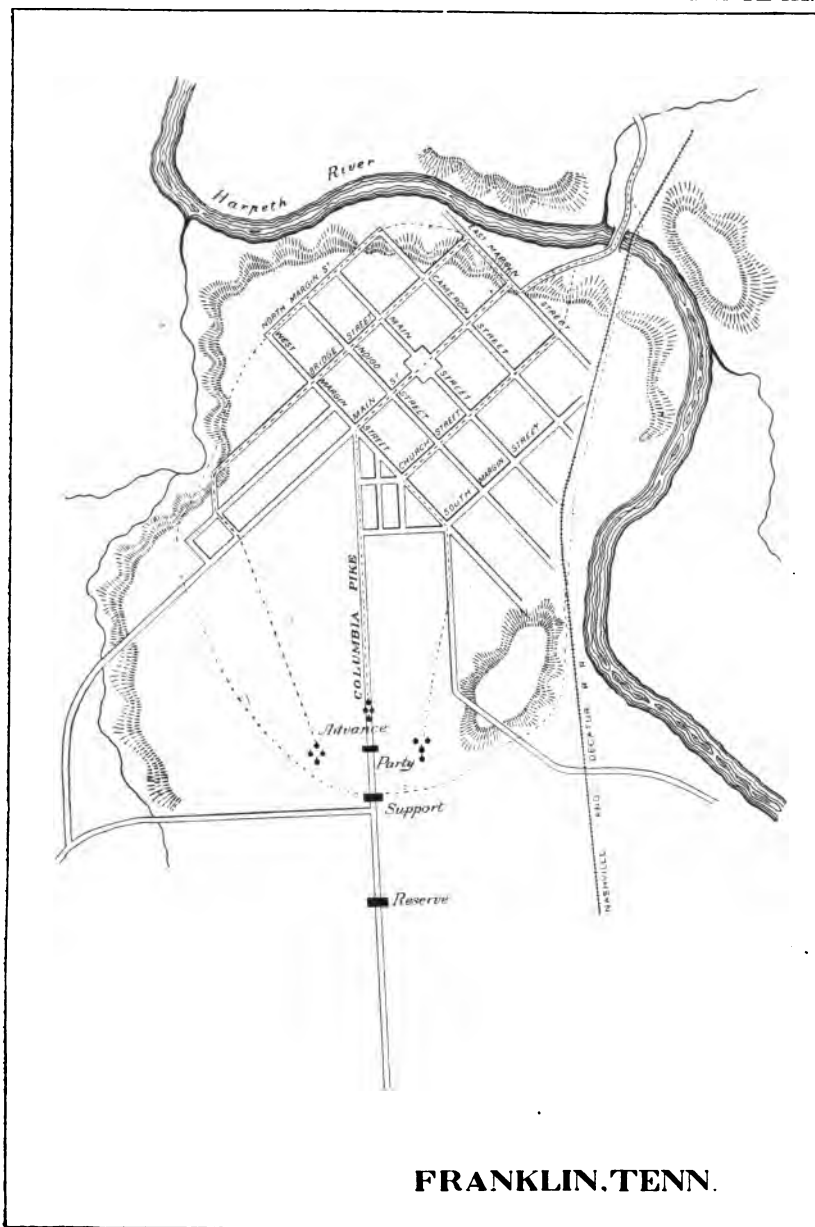
A village is approached at night in the same manner as by day, with the exception that the distances and intervals between the different parts of the advance guard are less.

A strong patrol reconnoiters and enters a village in the same manner as the advance guard of a larger force.

In considering the details relative to the reconnaissance and attack of villages, most writers on minor tactics have in view the conditions presented by European villages, whose streets are generally narrow and crooked, and whose houses (usually built of stone or brick) are well adapted to defense. The broad streets of American villages, and the inflammable material of which their houses are mostly constructed, make them much more difficult to defend than European villages, and an advance guard might, consequently, enter them with less risk.

By way of illustration of the manner of reconnoitering and entering a town, let us suppose that an advance guard is approaching Franklin, Tennessee, from the south, on the Columbia Pike. (See Plate XI.)

• The advance guard halts from a half to a quarter of a



mile from the town, and two patrols are detached from the support to the right and left respectively. The advance party continues its march to the edge of the town, where it halts, the point continuing to advance. The point moving up Main street to Indigo street, signals that all seems well, and the advance party follows it up Main street, the flankers advancing along Church street and Bridge street. The right patrol from the support reconnoiters the railroad cut, and proceeds along the railroad. The left patrol reconnoiters the valley of the brook west of the town, and advances along North Margin street. The advance guard takes up its march, the reserve halting at the edge of the town. The patrols communicate as they pass Indigo, Main, Cameron, and East Margin streets. If any one of the patrols fails to be seen, the others halt until communication is established, the advance being as expeditious as possible. On passing through the town, the advance party seizes the bridge, which is first reconnoitred by the point. The right patrol crosses the railroad bridge, where it halts and rejoins the support on the arrival of the latter on the north bank of the Harpeth. The left patrol crosses the bridge in rear of the advance party and rejoins the support. The reserve passes through the town as soon as it receives signal that the patrols are all through. The hills on the north bank are occupied promptly, as they command the town and the passage of the Harpeth.

CAVALRY PATROLS.

The principles governing the action of infantry patrols are, in the main, equally applicable to patrols composed of cavalry: but there are some points of difference which must be considered.

Owing to the greater mobility of cavalry, the distances and intervals separating the scouts from each other, and from the main body of the patrol, are greater than in infantry. In very open country the cavalry scouts may sometimes be as far as 1,000 yards apart. Another essential difference in the conduct of infantry and cavalry patrols, depending also upon the superior mobility of the latter, is the detaching of scouts from strong cavalry patrols. These scouts are not merely detached after the manner of the flankers, or even the flank patrols, of an advance guard; but work quite independently, joining the main body of the patrol at fixed rendezvous, or maintaining connection with it by occasionally sending in reports to its commander. These detached scouts usually work in pairs, one man being in command, and may be sent as far as five or six miles from the main body of the patrol. Each scout should understand what he is to look for, and how and where he is to make his report.

Intelligent and well-mounted soldiers should be selected for patrol duty. Before starting out, the patrol is carefully inspected by its commander, who, in addition to seeing that his men are in proper condition and properly equipped and supplied, assures himself that his horses are in good condition and well shod. The same precautions in regard to arms and accouterments are taken as in the case of an infantry patrol.

As in the case of infantry, no rules for the formation of the patrol can be positively prescribed, except the general and important one, that the patrol must always be so formed as to facilitate the gaining of information, and insure, if possible, the escape of at least one man if the patrol should be cut off. It may be said, however, that every patrol, however small, should, if possible, have a scout detached as advance guard, and another as rear guard. When the size of

the patrol permits, flankers should also be thrown out. All the men of a small patrol, and the point, flankers, and rear guard of a strong one, should have their carbines loaded and advanced, or the pistol at the position of "raise" or "lower." The distances and intervals between different parts of a patrol depend upon circumstances. They should not be so great that the commander could not easily convey his commands by voice or signal, and would rarely exceed 100 yards except in open country. At night, the flankers and detached scouts should always be drawn in, unless their communication with the main body of the patrol is perfectly secured.

The signals for a cavalry patrol are the same as in the case of the infantry (substituting *carbine* for *rifle*), with the exception that in the signal "Enemy in sight" the carbine is held up in one hand by the small of the stock, and to ask for reinforcements the arm is extended horizontally, holding the piece vertically, and given a circular motion several times.

On open ground the following signals may sometimes be found useful:

Enemy in sight: Move in a circle at a walk, and halt: to the right, if the hostile troops are cavalry; to the left, if they are infantry. For a mixed force, describe a figure eight. This movement may be repeated as often as necessary, but the halt should always be distinct.

Enemy advancing: Same as above, except that the circling is continuous and at a trot. If the enemy is advancing rapidly or in heavy force, make the signal at a gallop.

As the movements of the scout, while making these signals, would probably be seen by the enemy, they should be used only when the signals with the carbine might, owing to distance, be misunderstood.

At night, a patrol must rely mainly upon its sense of hearing. Strict silence should be maintained, and smoking

should be prohibited. Each scout should watch his horse for indications of danger, not only at night, but at all times; and if the animal pricks up his ears attentively or snorts excitedly, the warning should never be neglected, but the cause should be investigated.

Though exercising the utmost vigilance, and endeavoring to avoid being discovered, a cavalry patrol *must* move along turnpikes and good roads. To do otherwise would be to follow by-paths and traverse difficult ground, where the horses would often have to be led. The mobility which gives a cavalry patrol its special value would thus be lost, and the patrol would not be worth as much as one composed of infantry; for the horses would become a mere burden. The patrol should, however, always move upon soft ground or sward at the side of the road, if it be practicable to do so, and should always move with the least possible noise. De Brack says that, in the campaign in Portugal, the French cavalry patrols, having to march on rocky and resounding roads, wrapped the hoofs of their horses with sheepskin, tied around the pastern, with the wool inside; and that they thus approached very close to the English vedettes without being heard. Rüstow recommends this measure to cavalry patrols under similar circumstances. This incident does not, however, seem to be of any value further than illustrating the ingenuity which patrols are called upon to exercise.

The patrol commander should carefully select his route before starting out, and should adhere to it unless driven away by force. He should clearly indicate the places of rendezvous, and explain to the scouts, as far as practicable, how to reach them. "Nothing," says Shaw, "can be more disconcerting to the commander of a patrol than to miss his scouts at the time or place at which they should come in. He does not know whether they have lost their way, or whether they

have fallen into hostile hands, and his further action is often dependent upon their reports, which he does not receive. The position also of the scouts who have lost their way, or who have not hit off their party at the place of rendezvous, is one of difficulty. In the attempt to find their commander, they constantly wander about in an aimless manner and end by losing themselves altogether."

The general manner of reconnoitering different kinds of ground is the same as in the case of infantry patrols; but the following details should be noted: Scouts should peep around every corner or turn in the road before riding on. If they come to an object too extensive to be reconnoitered without assistance, they must signal for reinforcements, or one man must ride back and report to the patrol commander, while the others remain in observation. If obstacles are encountered on the road, such as barricades or felled trees, the patrol must, if possible, move round them and continue its reconnaissance. If the patrol can remove the obstacle, it does so; otherwise, or if a bridge is broken, word must be sent back, if a column is following.

In ascending a hill, a scout should not ride quite to the top; but, unless time is urgent, should halt at a short distance from the crest and then advance with caution. It may often be well for two scouts to approach the crest together, one of them dismounting and reconnoitering the crest on foot while the other holds his horse.

A cavalry patrol or advance guard approaches a town or village in practically the same manner as corresponding bodies of infantry. A city or large town should ordinarily be avoided by a reconnoitering party; but after a victory, when the enemy is demoralized, more may be dared than would otherwise be possible. After the battle of Wörth, Nancy, a city of 50,000 inhabitants, was entered by six

Uhlands; and twenty-six others, who followed later, occupied the railroad station and tore up a portion of the track. The whole squadron (150 men) then assembled and marched through the city.

As a rule, a patrol should not halt at inhabited places, taverns, etc., or enter an enclosure. If it is necessary to halt to feed or water the horses, some secluded place should be selected, which could be guarded by sentinels in concealed positions. A neglect of this precaution has more than once been the cause of disaster. In 1846, Captain Thornton, reconnoitering with a troop of dragoons, imprudently entered a corral with his command. The result is thus described by Ripley:

"Hardly had the rearmost files entered when the alarm was given. The squadron was in confusion; but Thornton, taking the lead, dashed at once at the only opening of the inclosure. That was already shut and defended by a large body of Mexicans, and the passage was impracticable. In searching for a passage to the right, the dragoons encountered a galling fire, which increased the confusion, and Thornton's horse falling wounded upon his rider, the whole party gave back to the center of the corral. Captain Hardee, who succeeded to the command, rallied the men, and, after a vain endeavor to find an opening, surrendered. In this affair Lieutenant Mason had been killed, and sixteen non-commissioned officers and men had fallen dead or wounded."*

A similar occurrence at Pont-à-Mousson on the night of the 12th-13th of August, 1870, is thus described by Borbstaedt:

"The detachment, consisting of sixty dragoons and husars, was received by the inhabitants in the most friendly manner: so that the soldiers for the most part dismounted

*"The War with Mexico," Vol. I., page 107.

and put their horses into stables, while the commandant, accompanied by a few men, rode out to reconnoiter. All of a sudden, two squadrons of Chasseurs d'Afrique and Spahis, most probably sent for by the inhabitants from Metz, dashed into the town, surprised the dragoons and hussars in the stables, and took the greater part prisoners, the townspeople now turning on the Germans, and giving their ready assistance to the French cavalry."*

As a rule, patrols do not fight, except to escape capture; but when there is a line of patrols whose front is covered with detached scouts, each scout and each patrol may be charged with a certain amount of resistance, in order to gain time for the bodies in rear. This will be considered more at length in the next chapter.

Connecting Patrols.—These patrols are always composed of cavalry. The patrols keep in the intervals between the different bodies, and detach scouts to the front and flanks. The scouts to the front watch the enemy: those on the flanks observe all movements and changes of position of the body of troops nearest them, with which they keep in constant communication. The commander of the patrol keeps the body of troops on either flank informed of the movements of the other. If the army is moving on parallel roads, in a close country, the connecting patrols must be detached from the cavalry at the head of each column. In this case they communicate at each lateral road, and each column is thus kept informed of the progress of its neighbor, and of the condition of affairs along the entire front. If the army is marching on parallel roads in a sufficiently open country, a chain of patrols extends along its front, thus linking, as it were, the different columns. Connecting patrols are always strong.

*"History of the Franco-German War," page 357.

Pursuing Patrols.—These are always composed of cavalry, and may be either small or strong. They keep on the trail of the enemy, do not lose contact with him, and keep their own army fully informed of his movements. They should have definite orders as to the distance to which they are to pursue, and the matters which it may be specially desirable to report. For instance, the pursuing patrols the day after the battle of Ligny doubtless had special instructions to report everything that would indicate whether the Prussians were retreating upon Namur or upon Wavre. Pursuing patrols must not be confounded with a pursuing force following headlong upon the heels of a routed army to complete the destruction of battle. They merely follow, watch, and hang on an army that is retreating without demoralization, in order that touch with it may not be lost. To gain and transmit information are the objects of a pursuing patrol, and the capture of prisoners, or the picking up of stragglers, must be sought only with a view to gaining information.

CYCLIST PATROLS.

On good roads and favorable *terrain*, cyclist patrols can generally operate more effectively than patrols composed of either infantry or cavalry. Though they cannot move so stealthily as infantry, they can move with much greater rapidity. They have an advantage over cavalry patrols inasmuch as their movements are practically noiseless, raise very little dust, and cannot be betrayed by the clatter of hoofs and the neighing of horses. Should it be necessary to leave the road and operate on rough and unfavorable ground, the patrol could easily conceal its bicycles in ditches or behind bushes, and proceed on foot. In this case the wheels

would at least be safer than the horses of a mounted patrol operating in a similar manner. For patrolling duty, the bicycles should have solid tires, and should be bronzed and devoid of all glitter. The formation and conduct of a cyclist patrol should be practically the same as those of one composed of cavalry.

BALLOON RECONNAISSANCE.

For more than a century, balloons have been used at various times in military reconnaissance. In fact, they were first employed for this purpose only eleven years after the first ascent of a human being in a balloon; the information gained by the French in a balloon reconnaissance at the battle of Fleurus (1794) having, it is said, contributed greatly to their victory. A balloon corps accompanied Napoleon's expedition to Egypt, and balloons were used by the French in the Italian War of 1859, by the United States army in the War of Secession, and by the French in 1870-71. From various causes, but little of importance seems generally to have been accomplished in balloon reconnaissances; but the great improvements made in aërial navigation in recent years leads to a general belief that greater results will follow this method of reconnoitering in future.

The three kinds of balloons used in reconnaissance are *free*, *captive* and *dirigible* balloons; the nature of each being expressed by its name. Free balloons are rarely used, as the impracticability of controlling their movements renders the gaining of information uncertain and its transmission problematical. Such balloons might indeed pass over the enemy in an extended theater of operations, and land in friendly territory, whence information could be sent back by telegraph or by means of carrier pigeons. But the issue of such reconnaissances is too doubtful to make them of much practical use.

The principal reliance in aerial reconnaissance is on the captive balloon. Its usual elevation is about 650 yards, at which height the different arms of the service can be distinguished with a field-glass at a distance of nine miles, or, in very clear weather, after a rain, at fifteen miles. The balloon can, however, easily ascend as high as 2,000 yards, from which height the field of view is greatly extended.

The balloon train consists of six wagons, one of which is used to transport the balloon already inflated, the others conveying necessary equipments in the form of windlasses, cables, hydrogen tubes, two steam engines, motors and dynamos for electric lighting, etc. By means of the hydrogen tubes, the balloon can be inflated in half an hour. As a matter of safety, there should be at least two anchoring cables to the balloon.

That the balloon reconnaissance may be of any value, it is necessary that the reports should be clear and intelligent, and that they should be promptly transmitted. The first requisite can be secured only by having the reconnaissance made by a well-qualified professional soldier, not by a mere aëronaut. The second is gained either by passing the messages down to the ground in rings which slip over the anchoring cables; by telegraphing them directly from the car of the balloon; by means of signal flags; or by the use of the telephone. A photographic apparatus should also be a part of the equipment of the balloon, by means of which correct representations of the topography or the enemy's positions may be obtained.

The danger to be apprehended from the fire of the enemy upon the balloon is not great. Above 1,650 yards the balloon is safe from hostile fire; and, if struck by a projectile at a lower distance, the descent will generally be sufficiently gradual to be harmless.

In a balloon reconnaissance it is, of course, impossible to observe the general principle of "seeing without being seen." Indeed, so able a military writer as Dragomiroff condemns the use of the balloon in reconnaissance, because it betrays the presence and approximate location of the troops using it. This objection can not, however, be regarded as a serious one; for balloons, with their somewhat cumbersome train, will never be used by any but large commands, whose presence can not be concealed, and whose position can not be betrayed to any hurtful degree by the location of one or two balloons. On the other hand, the sight of a balloon in the air causes an uneasy feeling on the part of the enemy, who is thus made aware that he is being watched, and compels a degree of anxiety on his part that more than outweighs the disadvantage of any information that he may gain from the situation of the balloon.* When the balloon is provided with an electric search-light, and the reconnaissance is conducted at night, this annoyance and uneasiness on the part of the enemy will be greatly increased.

The perfection of the dirigible balloon will vastly enhance the value of balloon reconnaissances, and will doubtless, at the same time, present a new danger. It is claimed that Germany, France, and England each possess at present

*In this connection, the remarks of General E. P. Alexander, of the Confederate army, are interesting. In his paper on "Artillery Fighting at Gettysburg" he says: "I was particularly cautioned in moving the artillery, to keep it out of sight of the signal station upon Round Top." And he adds in a foot-note: "This suggests the remark that I have never understood why the enemy abandoned the use of military balloons early in 1863, after having used them extensively up to that time. Even if the observers never saw anything, they would have been worth all they cost for the annoyance and delays they caused us in trying to keep our movements out of their sight. That wretched little signal station upon Round Top that day caused one of our divisions to lose over two hours, and probably delayed our assault nearly that long. During that time a Federal corps arrived and became an important factor in the action which followed."—*Battles and Leaders of the Civil War*," Vol. III., p. 358.

dirigible balloons that can be easily moved in any direction. The field of reconnaissance will thus be greatly enlarged; but if the easy navigation of the air becomes practicable, the armed opposition of balloon to balloon will introduce a new element which it has not heretofore been necessary to consider.

Reconnaissances with captive balloons will not usually be made from any position more advanced than the reserve of the outpost. A more advanced position would place the balloon train in some jeopardy, and would not increase the field of view sufficiently to justify the increased danger.

While the value of balloon reconnaissance is still somewhat problematical, this method of gaining information of the enemy presents so many possibilities that it cannot be safely ignored.

CHAPTER V.

THE CAVALRY SCREEN.

The cavalry is the eye with which the army sees. The activity of this arm can best ascertain with clearness the measures and intentions of the enemy.—*Von der Goltz.*

The employment of the cavalry as a reconnoitering screen in advance of the army was habitual in the wars of the Consulate and First Empire, though the details of the manner in which the French cavalry performed the duty of screening and reconnoitering have not, unfortunately, been preserved. We know only that (excepting the campaign of 1813, in which the cavalry, destroyed in Russia, had not been re-created) the movements of Napoleon's armies were always covered by a screen of cavalry pushed forward to a considerable distance. Davoust's famous flank march from Ratisbon to Abensberg was screened by cavalry; and in the Russian campaign Murat's cavalry covered the front of the French army, being sometimes fifty miles in advance of it. The campaigns of 1806 and 1814 furnish brilliant examples of the use of a cavalry screen by Napoleon; and the conduct of Katzler's contact squadrons, and the extended use of covering detachments of Cossacks, show that the Allies had learned the lesson of screening and reconnoitering from their great opponent.

In the long period of peace from Waterloo to the Crimea (scarcely broken by the insignificant hostilities of 1823, 1832, and 1849) the principles of war as demonstrated by the greatest of military leaders were forgotten or neglected in a mass of theoretical tactical details; and in the Crimean and

Italian wars the commanders, as a rule, were ignorant of everything that took place beyond their chain of sentinels. In the War of Secession the art of screening and reconnoitering was revived by the American cavalry, and brought to a high state of development, notably by Sheridan and Stuart.* In 1866 the Prussians began to evolve from their own experience principles already demonstrated in America, but ignored in Europe; and in 1870-71 the results obtained by the German cavalry screen were so striking as to command the attention of the military world.

The cavalry screen may be said to constitute the strategic advance guard of the army; each column in rear furnishing what may be termed its own tactical advance guard. The screening may be performed either by the corps cavalry or the cavalry divisions.† In the former case the head of each division or corps is covered by its own cavalry: in the latter, the cavalry divisions cover the front of the entire army. In our service it is probable that, following our own traditions, the corps cavalry would be reduced to a minimum, and that the cavalry divisions, united into a *cavalry corps*, would be intrusted with the duty of screening the front of the entire army. During the Peninsula campaign, Cooke's cavalry screened the advance of the Army of the Potomac to the

*This duty was also well understood and efficiently performed by Cooke, Stoneman, and Pleasonton.

†The corps cavalry is the force attached to the army corps; generally in the proportion of 400 to 600 sabers to each infantry division. The cavalry divisions are bodies under the command of cavalry generals, subject only to the orders of the commander of the army, or the chief of cavalry if there be one. In the German army the cavalry attached to the army corps is termed "divisional cavalry," a part being assigned permanently to each infantry division. The term "divisional cavalry" was formerly applied to the cavalry attached to an army corps in our service (see Cavalry Drill Regulations of 1891, paragraph 972), but the designation has since been changed to the more appropriate term "corps cavalry." The French have, in this respect, an organization similar to our own, the cavalry being assigned to the army corps instead of being attached to the divisions.

Chickahominy, and masked its flank march to the James River. Stoneman performed a like service for Hooker in the masterly movement which preceded the battle of Chancellorsville; and had the cavalry not been detached on a bootless raid, the surprise of the Eleventh Corps by Stonewall Jackson would have been impossible. In the Gettysburg campaign the screening and reconnoitering duty was excellently performed by Pleasonton's cavalry corps.

In the Wilderness and Appomattox campaigns similar duty was similarly performed by Sheridan's cavalry; and in the Red River campaign the Union cavalry so completely screened the movements of the rest of the army, that Taylor, a few hours before the battle of Sabine Cross-Roads, reported to Kirby Smith that no advance had been made in his front, except by cavalry. In these campaigns no divisional cavalry existed. If a division were acting independently, it would, of course, be necessary to attach some cavalry to it; in which case the operations of the cavalry detachment would be regulated by the general principles that govern the conduct of a screen in front of an army.

Distance of the Screen from the Army.—The distance of the cavalry screen from the main army will depend upon many considerations, chief of which are the distance and character of the enemy. If the enemy is at a distance, or if his cavalry is cowed and demoralized, the screen may safely be pushed much farther to the front than when he is nearer and his cavalry is bold and enterprising. In 1870-71 the German cavalry "overflowed the country miles, and even several marches, ahead of the main body of the infantry."* The screen was rarely less than 15 or 20 miles in front of the army, and during the march from the battle-field of Sedan to Paris it was always several marches ahead. In the Gettys-

*Hohenlohe.

burg campaign, however, where the enemy was enterprising, aggressive, and confident, Buford's screening cavalry was habitually less than ten miles in advance of the army. The cavalry screen should be, as a rule, at least one march in advance of the main force; but as it betrays, to a certain extent, the presence of troops behind it, it may sometimes be advisable to draw it in close to the main body with a view to deceiving the enemy. Thus, in 1814, Napoleon directed Marmont to execute this device for the purpose of misleading the Allies.

It is, therefore, impossible to prescribe definite rules for the distance of the screen from the army. While the armies are concentrating, the cavalry may generally be pushed far ahead of the army, patrols being extensively and vigorously used; but when the armies begin their advance, the distance is usually reduced to not more than 15 or 20 miles, diminishing after contact to 5 or 6 miles, and finally disappearing altogether when tactical operations begin. In general terms, it may be stated that contact with the enemy is the first consideration, and that this will largely and generally influence the distance of the screen from the forces in rear.

Frontage of the Screen.—The object of the cavalry screen is two-fold: namely, (1) To gain information of the enemy, and (2) To prevent him from gaining information of one's own army. The methods necessary to gain these two objects necessarily conflict. To reconnoiter, the greatest dispersion of front is desirable; but if the screen be too widely extended, it will be everywhere weak, its concentration will be difficult, and the enemy will be able easily to rupture it. The front covered by the advanced cavalry will, therefore, depend upon circumstances; such as the nature of the country (open or intersected); the number of roads parallel to the advance (as affecting the prompt transmission of intelli-

gence to the rear); and the number of lateral roads (as facilitating the concentration of the screening troops). *Above all is the consideration of rapid concentration.*

In the advance from the Saar to the Moselle the front of the German screen averaged from five to six miles to a regiment;* a division of six regiments covering a front of 30 miles, and a force of ten regiments reconnoitering on a front of 60 miles. The screen was thus very weak at all points; and its success was mainly due to the weakness and inefficiency of the French cavalry. Trench is of the opinion that a cavalry division (3,600 sabers) should, in open country, cover a front of 20 to 25 miles, when there is no reason to apprehend the close proximity of large bodies of the enemy; and that in a close country, where the scouting parties would have to work much nearer to each other, the front should be reduced to two-thirds or half of that distance. Bonie takes from 11 to 12½ miles for the front of a division. While emphasizing the statement that no fixed width of front can be prescribed, it may be assumed that the front covered by an American brigade in screening and reconnoitering would average ten or twelve miles.†

Certain bodies of the enemy will generally be assigned as the objective of the brigade; or, when still at a distance from the opposing army, a certain zone of country will be assigned to it; and the front to be covered by the brigade will thus be incidentally determined. To form an efficient screen, there should be about a brigade of cavalry for each army corps in the force covered.

Formation of the Screen.—The main body of the cavalry employed in screening duty should be kept concentrated

*A German cavalry regiment numbers 600 sabers.

†A cavalry brigade in the U. S. Army consists of three regiments, and would accordingly have a war strength of 3,600 sabers—exactly the strength of a German division.

and well in hand. It is a mistake to fritter away the force in small groups which could not concentrate in time for fighting, however much such a plan might facilitate reconnaissance. The strength of the detachments should be adjusted to the nature of their duty; and it may be stated, in general terms, that the small patrols are charged with the service of information; and the larger bodies, with that of security.

It must be frankly stated that the question of the proper formation and employment of the cavalry screen has not yet emerged from the realms of theory. The best European writers on the subject base their ideas upon the experience of a single war, in which the successful cavalry was not resisted by a worthy opponent; and these ideas may, moreover, be said to be based upon the *results* rather than upon the *methods* of the Franco-German conflict; for there was no uniformity in the screening and reconnoitering methods of the Germans in 1870-71. The student must, therefore, regard the following typical formations as suggestions, and not as authoritative prescriptions. In any case, the commander must make his dispositions in accordance with circumstances rather than diagrams; and in almost every case, some modification of the typical formations will be rendered necessary by the nature of the country, the direction of the roads, or the character, proximity, or strength of the enemy.

If the brigade is operating in an open country, one regiment constitutes the reserve, and is preceded by a squadron of each of the other regiments at a distance of about two and a half miles. These squadrons, constituting the supports, are separated by an interval of not more than six miles, the reserve being situated centrally in their rear. About two and a half miles farther to the front is the second squadron of each advanced regiment, either in one column, or in two

columns of two troops each. These may be termed the intermediate squadrons. They are separated by about the same interval as the squadrons composing the supports. About two and a half miles farther to the front, the remaining squadron of each regiment is distributed along the front in contact troops, which are preceded at suitable distances by patrols, detailed either from the contact troops, the intermediate squadrons, or the supports. When necessary, these patrols detach scouts still farther to the front. (See Plate XII.)

When the enemy is at a distance or lacking in aggressiveness, the intermediate squadrons may be placed in the contact line; thus extending the front at a time when "information" is to be considered more than "security." If the enemy is close and enterprising, the intermediate squadrons may be merged with the supports, the front being contracted and distances diminished, owing to the paramount importance of "security."

The intervals between the contact troops are such as to admit of covering the front assigned to the brigade. In a close country, the number of contact bodies and the intervals between them depend upon the number of available roads within the front occupied. On some roads there might be one troop; on others, two or three; or the whole squadron might have to march on a single road. As a rule, a greater number of columns would be requisite in a close country than in an open one. Each of the contact troops, each intermediate squadron, and each support, as well as the reserve, has its own advance guard, and keeps in constant communication with the bodies on its right, left, front, or rear. The major commanding the contact troops of each regiment may accompany any troop, but is habitually with the second. The colonel of an advanced regiment is habit-

ually with the support, but may accompany any one of his squadrons. The brigade commander is habitually with the reserve, but goes wherever his presence seems necessary. If the reconnaissance is likely to lead to a battle, it may be well for him to be with the contact line.

A battery of horse artillery should be attached to the brigade, and should habitually accompany the reserve, marching in rear of the leading squadron.*

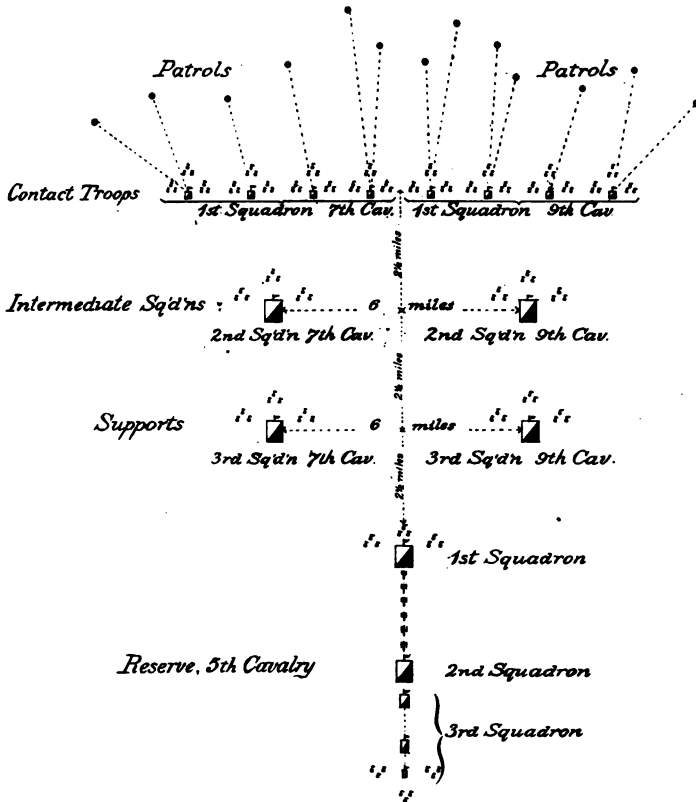
The battery should not, in any case, be placed so far to the front that the leading troops could not maneuver or fall back without exposing it to capture. If the cavalry is pursuing the enemy, the battery should be with one of the leading regiments; but guns should not be detached from the battery except in unusual emergencies—for instance, in the case of a village held by a hostile, but undisciplined, population, upon whom the moral effect of a few shells would be great. If a considerable cavalry fight is expected, the battery should always be with the reserve. If a force of infantry in wagons accompanies the brigade, it forms part of the reserve.

When the brigade is marching on two parallel roads, the reserve follows the regiment that seems most likely to need assistance. If the extent of front is too great to admit of the reserve moving promptly to the assistance of either wing, the unsupported wing must be given great independence, and, if necessary, must adopt a separate line of retreat.

When the brigade is forced to march in a single column, the contact troops, the intermediate squadron, and the sup-

*As the American cavalry brigade is equal in numerical strength to a French, German, or Austrian cavalry division, it would seem, at first, that it should have a number of horse batteries equal to those of the Continental cavalry division. The condition of our roads, and the general nature of the *terrain* in any of our probable theatres of operations, are not, however, favorable to the extended use of artillery; and the Cavalry Drill Regulations (paragraph 753) are undoubtedly right in assigning only one battery to the cavalry brigade.

— Cavalry Screen consisting of 1 Brigade - 3 Regiments —



port are all furnished by the leading regiment. A strong patrol should be pushed out well to the front, and a troop should be detached to a considerable distance to either flank. These distances cannot be definitely prescribed: they should be great enough to give the column warning in time to prepare for action, but not so great as to expose the detachments to imminent danger of being cut off by an enterprising enemy. The immediate front should be covered by two contact troops.

When the ground permits, and no serious engagement is expected within the next twenty-four hours, all three regiments may march on the same front, the brigade thus having twelve contact troops and no reserve. This formation is desirable whenever it can be adopted, as it promotes celerity of movement, facilitates foraging, and increases the front of reconnaissance. This formation may be adopted even when the several columns are a short day's march from each other; as the concentration on the center column could then be easily effected within twenty-four hours.

The duty of contact troops being very arduous, they must be relieved as often as practicable.

A rear guard is always provided from the reserve. It generally consists of two troops, and is charged not only with the arrest of stragglers and the preservation of order, but also with keeping a careful watch for all suspicious indications in the rear. If clouds of dust are seen, the cause must be investigated; and villages and prominent points must be watched after the column has passed, to see that no signals are given out to the enemy.

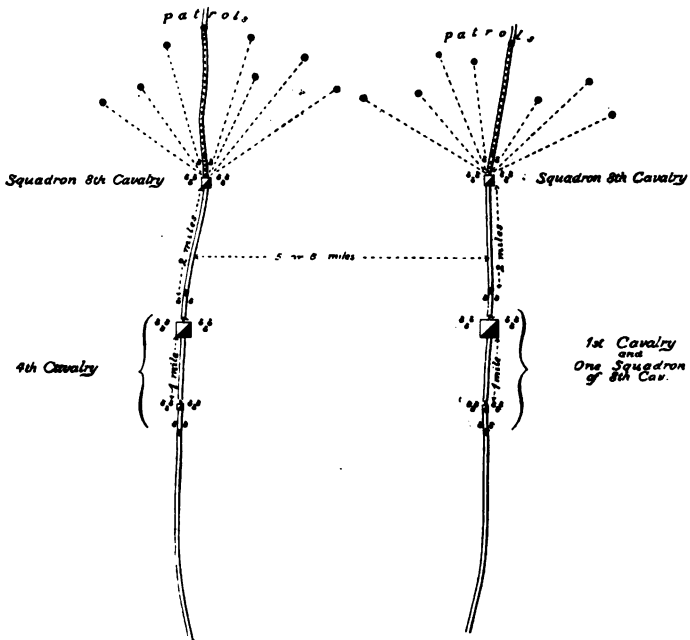
The topography of most of the States of the Mississippi Valley, with their absolutely parallel roads a mile apart, and with lateral communication at every mile, would probably lend itself admirably to the typical formations suggested

above; but in many of the more wooded and broken regions of the United States and Canada, where the roads are fewer and less regular, the following formation, based upon the experience of the War of Secession, would doubtless be much better.* The brigade, if practicable, operates on not more than two roads, about five miles apart; a regiment and two squadrons on one road, and a regiment and one squadron on the other. (See Plate XIII.) Each body detaches a squadron about two miles to the front. In advance of these, patrols, pushed out to suitable distances, cover the entire front, maintaining communication with the center, and forming a line of patrols extending about three miles beyond the roads used by the brigade. This gives a line of patrols about eleven miles long, sixteen patrols being employed—eight from each advanced squadron. The advanced squadron on each road may either be held together or broken up into supports for the patrols, as circumstances may require. In some cases each patrol may even be supported by a half-troop. Each flank of the line is strongly supported

*"In the Shenandoah Valley the roads leading in the direction of the enemy were generally not more numerous than two, each of which was important enough to occupy with a brigade, or oftener with a division, of cavalry. The enormous distances to which the German cavalry was sent apply to conditions that would not exist in the presence of an enterprising and efficient opposing cavalry."—General Wesley Merritt, U. S. A., in response to inquiries by the author on this subject.

"It remains yet to be proved by the contact of equal foes, whether the immense spread of the German cavalry in 1870, radiating in decreasing subdivisions from a common center, can be maintained, to its full extent, in the presence of an equally active cavalry foe. It is more likely that to obtain the information which in '70 was brought in by small groups of horsemen, fearlessly riding over the country at a great distance from their regiments, it will be found necessary to hold them somewhat more in hand and push forward on every avenue of approach to the enemy a self-supporting body of cavalry of considerable size, trained to fight under all conditions. So it is that the careful study of the expeditions of cavalry against cavalry, so fruitful of good results in 1863, '4 and '5, is of the first importance to us as students of cavalry progress."—Major J. B. Babcock, U. S. A. in *Journal of the United States Cavalry Association*.

— Cavalry Screen consisting of 1 Brigade on Two Roads. —



by nearly half of the brigade; and any small force of the enemy penetrating the center of the line would be caught between the two columns. No road practicable for a large force should be between the columns, unless timely information and speedy concentration were so sure as to leave no danger of a large hostile force separating the two parts of the brigade.

If parallel roads do not exist at suitable distances, the force must be held in a single column in rear of the center of the line of patrols, two squadrons, if necessary, being detached to the front. In fact, whatever alterations circumstances may demand in any of the foregoing dispositions, the main body of the brigade should, in any case, be on, or near, the principal route by which the enemy may advance, and must be as concentrated as possible. Lateral roads must be reconnoitered, and, if necessary, occupied by covering patrols.

Patrols.—Scouting patrols are sent out in advance of the contact troops to such distances as circumstances may require. They are either small patrols or officers' patrols; the latter being always under the command of an officer, and generally varying in strength from two to ten men—sometimes consisting of one or two officers alone. Larger detachments may be necessary for particular objects; but, as a rule, the patrols should be small, as they would otherwise be too conspicuous, and would lack the mobility essential to the proper performance of their duties. As a general rule for the size of a detachment, it may be said that if it is to fight, it can not be too strong; if it is merely to observe, it can not be too weak. If, however, in the latter case, it is likely to encounter similar parties of the enemy, it should be strong enough to hold its own against a hostile patrol of five or six men, such as are most frequently met.

The scouting patrols are taken generally from the contact troops, though they may be taken also from the intermediate squadrons, or even from the supports, when extensive reconnaissance is necessary. The number of these patrols will depend entirely upon circumstances; but they would rarely exceed two to each contact troop. In Bonie's system these patrols are termed "points," each consisting of an officer, a corporal, and six men. The point may be divided into two equal groups, the officer retaining immediate command of one and assigning the corporal to the command of the other. As a formation suited to secure the escape of at least one man, in case the patrol should meet with disaster, he suggests the following: The officer with the first group, preceded at some distance by a trooper; the corporal with the second group, followed correspondingly by another trooper, the distance from the leading to the rear trooper being about a third of a mile.

A patrol rarely goes more than six miles from the contact troops, and detached scouts do not often go more than the same distance from the patrol; but they may be called upon to make very long and exhausting rides, and the men and horses should, therefore, be carefully chosen. Each patrol should keep informed of the positions of the patrols on its flanks, and of its own squadron. Each troop and squadron should always have similar knowledge of the positions of corresponding bodies and the reserve, and each squadron and troop commander should know where to send his reports and where to establish connecting posts, if such posts are to be used.

The patrols explore not only to the front, but on the flanks of the brigade; the flanking patrols being generally taken from the reserve, on account of the heavy demands made on the advanced squadrons for other patrols.

The patrols should be given great freedom of action. It is their duty to gain and keep contact with the enemy, and in their movements everything should be subordinated to the one object of gaining information. They make no attempt to provide for the security of the troops in rear (except indirectly by furnishing timely information); do not think of fighting, except to escape capture; and if compelled to retreat, they choose such a line as to them seems best, regardless of the troops in rear. Neighboring patrols communicate their discoveries to each other, and, if they do not fall back upon the contact squadrons, join for the night, when practicable, in order to economize vedettes, and, at the same time, have the increased strength that comes from increased numbers.

If the scouting patrols are driven away by the enemy, they return as quickly as possible and continue their reconnaissance. "They may," says Bonie, "best be compared to flies, which one keeps constantly trying to drive away, but without effect, as they again and again return with an enervating persistence." The conduct of the German scouts in 1870 is thus described by the same author: "At noon, on the 8th of August, we received orders to saddle and mount, because the enemy's cavalry was in view. Some scouts were mistaken for the head of numerous columns. We then retired. From that moment until we reached Luneville, their scouts watched us incessantly. Linked to their army by horsemen, they gave an exact account of our positions, of our halts, of our movements; and as they watched us from some little distance, incessantly appearing and disappearing, they spread uneasiness."

These scouts, by their mere presence, appearing and disappearing, manifestly watching, invariably eluding pursuit, and returning to their impudent intrusion, produced upon

the French much of the annoyance caused by harassing patrols. Hohenlohe says:

"It is necessary to have seen it, as I did the day before the battle of Beaumont, before one can realize how our cavalry swarmed round the enemy's columns on the march, just as bees swarm out of their hives against an intruder. I saw one corps, which, as it marched by me during many hours, I reckoned at forty battalions, continually annoyed and delayed by our troublesome Uhlans. Sometimes whole companies broke out in anger from the column of march and fired volleys at single patrols, who then quickly fell back, and, as far as possible, avoided loss. The result of all this was indescribable fatigue for the enemy's infantry. They reached the end of their march as night fell, utterly tired out, and neglected, from very weariness, the most ordinary precautions as to outposts around their miserable bivouacs, while our infantry, quite near them, but without their knowledge, was comfortably housed in villages."

As a rule, officers' patrols are detailed for each of the main routes and the flanks, the intervening country and lesser roads being intrusted to small patrols under non-commissioned officers. If detached from a contact troop, the officer's patrol will have for its duty part of the general reconnoitering duty of the troop; if detailed otherwise, the patrol will probably be intrusted with a special mission—such as to open communication with some portion of the command which is not in contact with the brigade; to ascertain whether the enemy is present in a certain village; or to reconnoiter a distant village or defile. Officers' patrols thus sent out may go very much farther than the ordinary scouting patrols, depending while gone entirely upon their own resources. Officers are sometimes detached singly to watch the enemy or particular points, rejoining when their object

is accomplished or they are driven in by the enemy. A patrol sent out on a special mission should return the moment its object is accomplished, without undertaking other objects on its own responsibility. Care should be taken that neither too many missions nor too great an extent of ground be assigned to a single patrol.

Having in view the possibility of falling into the hands of the enemy, the officers should not have on their persons any papers that could give information to the enemy. They should commit their orders to memory, and then destroy the printed or written copy.*

Owing to the superior celerity and efficiency of officers' patrols, they are especially valuable in seizing postoffices, telegraph stations, etc. In entering a village or town in the enemy's country, the greatest safety is found in the sudden appearance and prompt disappearance of the party. The patrol should quickly gain the desired information, or seize the persons or documents constituting its object, and should disappear before the inhabitants recover from their astonishment sufficiently to appreciate how small, or how isolated, the party is.

The general rules for the conduct of the scouting patrols have already been considered in the subject of reconnaissance; and but little remains to be said about them. While independence of action must be given to these patrols; while no attempt must be made to rally them every night on the

*This rule might sometimes be profitably adopted by officers when not on duty with patrols. General J. G. Walker, formerly of the Confederate army, in speaking of Lee's "Special Orders, No. 191," a copy of which accidentally fell into McClellan's hands, says: "On receiving my copy of the order I was so impressed with the disastrous consequence which might result from its loss that I pinned it securely in an inside pocket. In speaking with General Longstreet on this subject afterward, he remarked that the same thought had occurred to him, and that, as an absolutely sure precaution, he memorized the order and then 'chewed it up.'"—*Battles and Leaders of the Civil War*, Vol. II., page 607.

advance guards of the contact troops; they will, as a rule, if driven back, rally upon the troops immediately in their rear. Indeed, it is impossible to get good scouting service unless the patrols are supported by a sufficient force to insure some degree of protection from the assaults of the enemy's cavalry. In the retreat from Spicheren, General de Cissey ordered a regiment of cavalry to drive away the German patrols which were pertinaciously hanging upon the rear of the French. A squadron quickly drove back the patrols, but coming upon the squadrons in rear, it was defeated and driven back with loss, and the annoying scouts were again seen hovering around the retreating army.

In this case the French attacking force was too small; and, in general, it may be said that the only way to get rid of the enemy's annoying scouts, when they are properly supported, is by inflicting a heavy defeat upon his cavalry. When (some days after his victory at Fisher's Hill) Sheridan withdrew down the Shenandoah Valley, he was followed by Early, whose parties of cavalry, as soon as they gained contact, hung upon the Union army much after the manner of the Prussian patrols described above. Sheridan, "resenting this boldness of an army so lately routed," halted the next day, and launched his entire cavalry force against that of the enemy. A spirited engagement of two hours' duration (known as the battle of Tom's Brook) resulted in the complete defeat of the Confederate cavalry, Lomax being driven in flight nearly thirty miles by Merritt, while Rosser was routed by Custer. So thoroughly was the Confederate cavalry used up that nothing further was seen of Early's contact parties.

The movements of the scouting patrols will depend on those of the enemy; for they must never lose contact with him, unless ordered to do so. The contact troops must al-

ways be ready, if possible, to lend prompt support to the patrols; and we thus have the movements of the leading squadrons entirely contingent upon those of the enemy. The patrols on the flanks of the brigade must endeavor to work round the flanks of the enemy; and for this purpose they and the supporting contact troops must be given considerable independence of action, both in advancing and in falling back.

Separation of the Duties of Security and Information.—

The duties of security and those of information thus come into direct conflict. The cavalry screen acts as the advanced outpost of the army, and the contact troops constitute the outpost for the main body of the cavalry thus employed. Now, an outpost must not be pushed so far in advance of the main body as to be beyond prompt support; and, on the other hand, scouting parties and contact troops must touch upon the enemy in order to get information. It follows, then, that when the opposing armies are at a distance of several days' march from each other, the duties of security must be separated from those of information; and this is usually effected by intrusting the latter duties to detached patrols. During the first concentration of the armies on the theater of operations, these detached patrols are generally small officers' patrols; celerity of movement and intelligence in reconnoitering being here even more necessary than usual, as (the regular cavalry screen not having yet been formed) the patrols are without support.

Transmission of Intelligence.—All information gained by the cavalry screen is promptly transmitted to the headquarters of the commander-in-chief. In case the screening force consists of corps cavalry, the reports are made to the corps commander. The commander of the screen keeps up constant communication with the commanders of the ad-

vance guards of the columns in his rear, and keeps them posted in regard to matters in their front which they should know. Staff officers from the headquarters of the army, or of the army corps immediately in rear, are frequently sent with the screening force, moving with the most important detachments. Thus, in the operations just preceding the battle of Mars-la-Tour, the chief of staff of the Xth Corps accompanied the 5th Cavalry Division. Many similar instances occurring in the same war might be cited.

Contact and Fighting.—On gaining contact with the enemy, concentration is the first consideration; for fighting will now be necessary, either to break his screen or to preserve our own, and victory should rest with that cavalry which is in the best formation for combat. The cavalry should be concentrated on two or more parallel roads, in supporting distance, ignoring the enemy's scouts and patrols, and pushing through to his reserves.* If the enemy has been more intent upon "information" than "security," and has his force disseminated, his reserves will be crushed, and the rest of his screen, finding a concentrated body of hostile cavalry in its rear, will collapse and seek safety in a rapid retreat by the flanks. If the enemy has his force concentrated, our cavalry must also be concentrated to avoid ruin. The following may, therefore, be given as an invariable rule: From the outset spare no means of gaining information; but on touching the enemy, shape everything to the end of being ready to fight. *The best way to screen an army is by defeating the opposing cavalry.*

If the patrols perform their duty properly, the presence of large forces of the enemy should be known in time for the necessary orders for concentration to be given; but if the contact troops find themselves in the presence of large hos-

*This was Sheridan's plan of action at the battle of Tom's Brook.

tile bodies, advancing or deployed for battle, they fall back upon the supports,* even though no orders to that effect have been given. Unless the contact troops are themselves surprised (which is absolutely without excuse), they fall back slowly; and when they have joined the supports, the united force falls back upon the reserve, or the latter is moved up to reinforce the former. If there is no special reserve, the threatened troop or squadron closes in upon a neighboring one, warning it quickly beforehand.

The concentration effected, the action of the cavalry depends upon circumstances. If the enemy's cavalry covers his front, it should be vigorously attacked. If the hostile screening force has been driven away from, or has voluntarily uncovered, the front of its army, our cavalry should remain in observation of the enemy's front only until our army is ready for battle, when it should withdraw to one or both flanks of the corps or army, taking up a position to check the attempts of the enemy to attack or reconnoiter. During the movement to the flanks, and in all movements of concentration, unceasing reconnaissance of the enemy is kept up by officers' patrols.

In an attempt to break through our screen, the enemy (especially if accompanied by artillery) must generally advance on one of the main roads perpendicular to its front—a road upon which our cavalry should itself be advancing. Good cavalry, under an efficient leader, should never be surprised by such a movement; for if provision for mutual support by the different bodies has been made beforehand; if communication has been maintained, and scouting has not been neglected; the enemy's movements should be quickly perceived and promptly met. If, however, the cavalry is

*It is presumed that at this stage the intermediate squadrons are merged with the supports.

driven in by the enemy, the direction of its retreat will generally depend upon the seeming designs of the enemy and the direction of his advance. The retiring cavalry may find it expedient to draw the enemy after it in a false direction, in order to obtain favorable conditions for its own army. But, in order to act judiciously in such cases, a correct appreciation of the state of affairs and a sound judgment as to what will be advantageous are necessary.*

The cavalry screen may sometimes find it necessary to act as a veritable advance guard, and fight a delaying action to hold an advantageous position and cover the deployment of the army; just as Buford held the position at Gettysburg until the arrival and deployment of the First Corps, keeping in check with his two small cavalry brigades Heth's Confederate infantry division. In such a case the chief reliance should be placed on dismounted fire action, and the cavalry should not hesitate to resort to the intrenching tool.

In combating the opposing cavalry screen, the judgment of the commander must decide whether the saber or the carbine should be used. This question will largely depend on the nature of the ground and on the action of the opposing force. It may be said that where suddenness of action is desirable, the saber should be used whenever possible; and the penetrating force should, therefore, be partial to its employment. On the other hand, the resisting force should incline to the use of the carbine, unless it has been able to concentrate as rapidly as its opponent, and thus has reason to expect favorable results from a counter-charge. Cavalry must always be ready for effective fire action; for it may find its

*Von Schmidt.

progress opposed by infantry or partisan troops sheltered in villages or behind breastworks.*

When the enemy is defeated, the cavalry resumes its place in advance of the other troops. Its mode of action then can not be better described than in the words of Boguslawski:

"Immediately after these actions [Spicheren, Weissenburg and Wörth], the cavalry divisions again led the way. Their mission was, above all, to pursue and keep in contact with the enemy. They threw forward strong detachments, which everywhere forced the enemy back and sought to discover the direction of his march or his new position. If they found their way clear before them, they sent on officers' patrols, with orders to push forward at any risk until they came upon the foe. These parties were dispatched in all directions, and performed their duties generally with equal ability and determination. It is they who spread the fear of *les Prussiens* many miles in front of the army corps' advance guards; to them cities like Nancy opened their gates without an attempt at resistance; and if here and there a cavalry patrol some days' march in advance of the division was dispersed or cut off, one or two horsemen generally made their way back to give intelligence, which was what was wanted."

It is not often, however, that the cavalry, even of a victorious army, can have its own way so completely. It is only when the cavalry has beaten its opponent into a sense of hopeless inferiority that such audacious reconnaissance can be successfully carried out.

Protecting the Infantry.—The work of the infantry is

*It seems incredible to American cavalymen that in December, 1870, a German cavalry brigade was stopped at the village of Vibray by twelve riflemen. The lesson taught by this humiliating check was not lost on the Germans; and the arms and training of their cavalry are now such that a repetition of such an occurrence would be impossible.

greatly lightened when a cavalry screen in advance performs its duty efficiently and has gained the upper hand of the opposing cavalry. In 1870-71 the German infantry was not disturbed by any apprehensions in regard to the enemy, but marched and rested in security, knowing that the country was reconnoitered so far ahead that the cavalry could give warning of the enemy's advance a full day before the attack could be made. During the entire war, the German infantry was not once alarmed by the enemy, and its marches were made as easily as in "autumn maneuvers."

Seizing Important Points.—In addition to screening the movements of its own army and discovering those of the enemy, the advanced cavalry is often required to seize passes, heights, or bridges, the possession of which is important, and which must be gained quickly, and held until the main army can arrive. In this operation, celerity of movement and fighting power are prime considerations.

In 1863 Rosecrans moved against the Confederate army, which occupied the line from Wartrace, through Shelbyville, along Duck River. His plan was to menace Bragg's left, and then turn his right by way of Hoover's Gap and Manchester. Thomas' corps, which constituted the center, moved out on the Manchester road, covered by Wilder's brigade of mounted infantry. A Confederate corps under Hardee was in cantonments about three miles back of Hoover's Gap, and it was the intention of that commander, as soon as he should hear of an advance of the United States forces, to push forward and hold the gap at its northern entrance, where the ground was favorable for defense, but unsuited to camping. Striking the Confederate outposts on the hither side of the gap, Wilder pressed them so vigorously as to drive them through at a run. He then took up a position at the southern outlet of the gap, where he had the same defensive ad-

vantages that the enemy would have had at the northern end. Attacked here by greatly superior numbers, he held his ground until the arrival of reinforcements enabled him definitively to repulse the enemy. Thus with a loss of less than 100 men was secured a position which General Thomas expected to gain only at the cost of many lives.

Foraging.—Another mission of the advanced cavalry is to furnish and cover foraging parties. The cavalry screen generally moves over an untouched country, and can thus easily supply itself: moreover, considerations of mobility demand that its train should be light, if it can not dispense with a train altogether. The contact troops should not be accompanied by wagons of any description, but should carry the necessary rations and forage either on their own horses or on requisitioned animals; and, to the greatest possible degree, the supplies needed by them should be obtained by “foraging liberally on the country.”

The train of the brigade, limited to the barest requirements, and preferably composed of pack mules, marches with the reserve. Special foraging parties are detailed from the intermediate squadrons or the supports. These parties, acting under the orders of the commander-in-chief, and under the general supervision of a commissary officer, generally operate on a line with, or in rear of, the supports, and incidentally cover the front and flanks of the reserve to such distances as may be expedient. The supplies gathered in excess of the needs of the cavalry are collected at convenient points for the use of the troops in rear.

CONNECTING POSTS.

Without means for its speedy transmission to the rear, the information gained by the cavalry screen would be of but little value. Scouts ride back to their patrols with information, and the latter constantly transmit intelligence to the contact troops, who, in turn, maintain communication with the intermediate squadrons, the supports, and each other, by means of communicating patrols or single scouts. Communication back to the reserve is also generally effected by means of patrols or single scouts; but between the reserve and the main body of the army, and sometimes between the reserve and the supports, it should be maintained by means of connecting posts.

Connecting posts are generally about five miles apart; but their number will depend largely on the number of well-marked points on the route; such as cross-roads, taverns, etc. Each post should ordinarily consist of one non-commissioned officer and six men. This would admit of two men being sent in each direction without denuding the post. One officer should have charge of four posts.

In a dangerous country, or when the number of men available for the duty is limited, the connecting posts may be larger and farther apart; often consisting of a half-troop under a lieutenant. If the country is very dangerous, the post should be concealed in a position selected with a view to defense and retreat, men being detached on the road to keep watch for couriers.

Two horses and men should be kept ready for immediate departure, and a sentinel must be constantly on the alert at the post. When an orderly arrives, he gives his dispatches to the commander of the post, who receipts to him for the same, and sends them forward by a fresh courier. The time

of arrival and departure should be noted on the envelope containing the dispatches. When a dispatch is delayed or lost, the officer sending it must be notified at once. The orderly bringing the dispatch will, ordinarily, rest for a time at the post; remaining, except in case of emergency, until the arrival of a courier from the opposite direction, in order that he may carry dispatches back with him, if any are brought in. On leaving a post the orderly is given careful instructions as to the road he is to follow and the pace at which he is to go; the rate of travel being noted on the envelope containing the dispatches. The orderly must always carry the dispatch on his person, so that it may not be lost in case of any accident befalling his horse. To prevent the dispatch from becoming illegible from wet, it should be enclosed in two envelopes.

A convenient form of envelope, reduced to one-fourth size, is represented below. The form of report given on page 142 could be used without the appended receipt, the envelope being duly signed and returned to the bearer as a voucher for the delivery of the message.

To	
DEPARTURE RATE OF SPEED	ARRIVAL
This envelope will be returned to bearer.	

A register should be kept at each connecting post, and frequently inspected by the superintending officer. It should show the time of arrival of each courier, whence he came, whither he went, the time of his departure, from whom his

dispatches came, and to whom they were addressed. Other remarks might be added when necessary.

If the posts are moving, the general rules for their conduct are the same as when they are stationary. Each commander who may have occasion to make use of a post should be kept informed where it is to be found: for instance, "till noon, at Beverly; till 6 p. m., at Bee Creek; till midnight, at Platte City."

When a force is stationary or moving directly upon a fixed objective, connecting posts should be practicable; but otherwise it is not always possible to establish them. The routes of the contact troops being entirely, and that of the whole brigade largely, dependent upon the movements of the enemy, it is not always possible to know where the chain of connecting posts is to begin or end. It must also be practicable to relieve the posts and rally them upon their respective troops, and they must not be exposed to great danger of capture by the enemy. Failing these conditions, connecting posts can not be considered, and dispatches must be sent through on the responsibility of a single messenger. Connecting posts will generally be found practicable from the reserve of the cavalry brigade back to the rear; but to the front of the reserve, towards the contact troops, they will generally be out of the question. At any rate, the contact troops must not establish them, as these troops will have enough to do in watching the enemy. The bodies in rear must be held responsible for preserving communication with the contact troops.

A REGIMENT AS A SCREENING FORCE.

When a single regiment of cavalry is required to screen the front of a considerable force, its frontage is necessarily such that it can have but slight power of resistance. Its

duty consists almost entirely in reconnaissance of the enemy, and it can contribute but little to the security of the force in rear, except by keeping it informed of the condition of affairs in front. It is out of the question to give it sufficient power of resistance for advance guard duties by adding infantry to it, as its mobility—its most valuable characteristic—would thus be destroyed. In some cases, however, infantry in wagons might take the place of the reserve.

The reserve of the regiment (one squadron) may be from five to ten miles in advance of the force which it covers. The other squadrons are pushed forward and to the flanks about two and a half miles, each sending forward two contact troops and retaining two troops in support. The distance between the contact troops and the supports is about two and one-half miles.

The following alternative formation has been devised by General Guy V. Henry, U. S. A., to use when it is desirable to keep a strong reserve well in hand. The reserve, consisting of six troops, is preceded by the rest of the regiment in columns of two troops each; the distance from the reserve and the intervals between the columns being each generally about two and a half miles, but varying as circumstances require. In each column each of the two troops in turn throws patrols to the front, which send forward detached scouts as may be necessary; each column covering its own front. The general principles regulating the screening and reconnoitering duties of a regiment are the same as in the case of a brigade.

CONCLUSIONS.

The general rules for the conduct of the cavalry screen may be summarized as follows:

1. Explore the country well to the front with small patrols, which must not lose contact with the enemy.
2. Keep the supporting bodies well in hand, so as to be able to concentrate rapidly.
3. Always maintain a reserve when near the enemy.
4. Keep up constant communication between all parts of the screen and with the troops in rear.
5. Always form and maneuver the screen with a view to beating the opposing cavalry. This is the paramount consideration.

CHAPTER VI.

REAR GUARDS.

Retreats of great generals, and of armies inured to war, have always resembled the retreat of a wounded lion, and such is, undoubtedly, also the best theory.—*Clausewitz*.

When an army has been engaged in a stubborn battle, its defeat invariably causes, to a greater or less degree, a disruption of its organization and a shattering of its discipline. Different battalions, regiments, and brigades are mingled together; the artillery is separated from its ammunition; baggage wagons are mixed up with the retreating forces; confusion takes the place of order, and subordination is lost in the instinct of self-preservation. If the army, while in this condition, be vigorously pursued by intact forces of the enemy, the disaster of battle will be completed by the havoc of pursuit, and the results of the action will be decisive.

But such pursuits as those which followed the battles of Jena and Waterloo are rarely practicable. In the former, the large body of comparatively fresh troops at the disposal of Napoleon, and in the latter, the late arrival of the Prussians on the battle-field, made possible a prompt and vigorous pursuit. As a rule, however, victorious armies are too much exhausted to pursue immediately with energy; and recent wars are peculiarly barren in instances of vigorous pursuit of a defeated enemy. General Johnston declares that his raw troops at Bull Run were as much demoralized by victory as their undisciplined opponents were by defeat. At Gettysburg a fierce struggle of three days left the Army

of the Potomac in poor condition to follow promptly its retreating antagonist. At Königgrätz the Prussians were thrown into such confusion by the concentric nature of their attack and the intermingling of their armies, that they were unable to resume their advance for nearly twenty-four hours, and were for three days completely in the dark as to the direction of the Austrian retreat. At Gravelotte the victorious Germans remained immovable for an entire day.

Whatever may be the extent of the confusion and demoralization attending their defeat, good troops need only to shake themselves loose from the enemy, and have a brief respite from molestation, to recover from their confusion and regain their morale. The protection needed for these ends is furnished by a rear guard.

Duty of a Rear Guard.—The duty of the rear guard can not begin until the battle has ended. On the field itself the withdrawal is covered by the artillery and cavalry, especially the latter when the ground favors its action; and it is only when the first halt is effected that the rear guard can be organized and a regular retreat begun. In thus protecting the army by a fraction of itself, it must be remembered that the enemy must change from order of battle to order of march to pursue, and that he can at first bring only the heads of his columns against the rear of the retreating force.

The rear guard must be organized as soon as possible, even at the expense of a delay comparatively near the enemy; for to trust to speed entirely in escaping would be to make such long and continued forced marches as to ruin the efficiency of the army and disintegrate it by straggling.

The rear guard must profit to the utmost by the defensive features of the ground, and at every opportunity take up a strong defensive position. The enemy will then have but two courses of action open to his choice: either to attack

with the heads of his columns, or to deploy for action. In the former, his advanced troops should be easily repulsed, as Murat's cavalry, attacking with "thoughtless ardor," was invariably beaten back by the hostile rear guards in the Russian retreat to Moscow;* in the latter, the enemy will be compelled to lose time in deploying, while the rear guard (which should wait until the enemy's dispositions for attack are about completed) should quickly ploy and disappear from his front, only to repeat the operation at the next favorable ground. In the meantime, the enemy, unable to advance quickly in deployed lines, again loses time in changing to a marching formation, and the main body of the retreating army steadily continues on its way without halting. The duty of the rear guard is thus epitomized by Napoleon: "The art of a general of a rear guard is, without compromising himself, to check the enemy, to delay him, and to oblige him to consume three or four hours in going a league."†

Ney's method of handling the rear guard in the retreat from Moscow may be taken as a typical example. Count Ségur thus describes it: "Every day, at five o'clock in the evening, he took his position, stopped the Russians, allowed his soldiers to eat and take some rest, and resumed his march at ten o'clock. During the whole of the night he pushed the mass of the stragglers before him, by dint of cries, of entreaties, and of blows. At daybreak, which was about seven o'clock, he halted, again took position, and rested under arms and on guard until ten o'clock; the enemy then usually made his appearance, and he was compelled to fight until the evening, gaining as much ground to the rear as possible."

Strength of the Rear Guard.—The strength of the rear

*For Davoust's strictures on Murat's method of combating the Russian rear guard, see Ségur's "History of the Expedition to Russia," Book VII., Chapter II.

†*Maximes de Guerre.*

guard depends upon the nature of the country, and the strength and character of the pursuing force. In a broken country, full of good defensive positions, it would be less than in an open country; and it would be greater when the pursuit was vigorously pushed in force than when it was feebly conducted by small parties. As a rule, it corresponds to the strength of an advance guard on a forward march; and would, consequently, vary from one-eighth to one-third of the entire force—generally consisting of about one-sixth. Care and good judgment are necessary in determining the strength of the rear guard. If it were too large, too many troops would be kept upon a peculiarly trying duty, and the object of the commander to withdraw quickly as many men as possible to a place of safety would be thwarted. If it were too small, it would be continually driven in upon the main body, to which it would communicate alarm and confusion; and the latter might even be compelled to halt and fight for the protection of the rear guard.

Morale.—Everything should be done to raise the morale of the rear guard. The best troops should be selected; generally those which have suffered least in the battle, or which have gained therein some local success. At the battle of Bull Run, Sykes' battalion of regulars, which alone remained undemoralized, was selected to cover the retreat; Blenker's division, which had not been engaged at all, being afterwards detailed as a rear guard. After the battle of Nashville, Forrest's cavalry corps, which had been detached at the time of the battle, was hurried back to act as a rear guard for Hood's army.

It rarely happens that an army is defeated on every part of the field, and troops, finding everything prospering in their front, are often perplexed and indignant at an order to withdraw, the necessity for which they do not understand.

These are the troops to select for the rear guard; and their morale should be still further raised, if practicable, by occasional ambuscades or offensive returns against the enemy, whenever an opportunity of taking him at a disadvantage occurs.

Offensive Returns.—The offensive returns should not, however, be pushed far; for their result, at best, can only be a moral one, and the distance between the main body and the rear guard must not be dangerously increased.

Offensive returns on the part of the rear guard may be necessary for its relief when closely pressed by the enemy at a bridge, defile, or ford. At Smolensk the bridge over the Dnieper was choked with a mob of stragglers, and the French rear guard, being at the same time closely pushed by the Russians, found itself in danger of being thrust into the river. Ney accordingly ordered De Fezensac to attack the enemy with his regiment. The attack was made in a spirited manner; the Russians were thrust back, and the rear guard fled across the bridge, which it immediately destroyed.

A similar incident at Boonsboro, Md., in 1862, is worth noting, especially on account of the ingenious and successful tactics employed. Fitzhugh Lee's cavalry brigade was covering the retreat of D. H. Hill from South Mountain. The pressure upon Lee's rear was so heavy, as he was passing through Boonsboro, that it became necessary to make an offensive return with one regiment, in order to cover the withdrawal of the others.

The attack was made by the 9th Virginia Cavalry (Col. W. H. F. Lee), which, owing to the narrowness of the street, charged in column of fours with a considerable interval between the squadrons. As one squadron, broken by the collision, retired to form again in rear of the regiment, the next squadron took up the charge, thus giving the Union column a succession of shocks. The 9th Virginia was finally pushed

back through Boonsboro with considerable loss; but not until it had gained time for the rest of the brigade to take up a position west of the town.*

Commander of the Rear Guard.—The commander of the rear guard should be a man of resolution and fertility of resource. He should be as prudent as a man can be without being timid, and as brave as a man can be without being rash. He should constantly present a bold front to the enemy, and should ever be ready to fight, even to the extent of sacrificing himself and his entire command if necessary; but he should remember that the great duty of the rear guard is to gain time, and he should know when to withdraw. He should be able to distinguish the enemy's preparations for a serious attack from insignificant demonstrations, and he should never allow the enemy to force him into a fight contrary to his own interests and intentions. He should never expect assistance, and should feel disgraced if the main body should be obliged to suspend its retreat to come to his aid.

Distance from the Main Body.—As the main body seeks to withdraw from the enemy as rapidly as possible, while the rear guard endeavors to delay him and watch his movements, it is clear that the distance between the two bodies can not be definitely prescribed. In general terms it may be said to be usually about the same as that of the advance guard from the main body on advance. If the distance were too great, the rear guard would be in danger of being cut off: if the distance were too small, the main body would be subject to constant alarms, and each reverse of the rear guard would quickly affect the main body, whose retreat would be constantly harassed by the enemy. In marching at night, the rear guard draws near the column, especially if the night is dark, the enemy near, and the inhabitants inimical.

*See McClellan's "Campaigns of Stuart's Cavalry," page 125.

Formation and Composition of the Rear Guard.—The formation of the rear guard is that of an advance guard reversed. Nearest the main body is the reserve, after which follow the support and the rear party, the extreme rear being composed of a point. The distances between the various bodies composing the rear guard are the same as those between the corresponding bodies of the advance guard. Flankers are thrown out as in the case of an advance guard, but they are more numerous, and the line joining them is a more pronounced curve, for the reason that flank attacks are more to be feared than in the case of an advance guard, and the flanks must, therefore, be more carefully covered. In an advance, an attempt against a flank of the advance guard might easily result in the assailing troops being themselves struck in flank by troops from the main body; but in a retrograde movement the main body is moving away from, instead of towards, the covering detachment, and thus a flank attack upon the rear guard must be met by the rear guard itself, or else the main body must halt and march back to its assistance. According to circumstances, a portion or the whole of the rear guard will march in readiness for action.

The composition of a rear guard is practically the same as that of an advance guard. It is generally composed of all three arms; but if there are enough cavalry and horse artillery to admit of the rear guard being composed exclusively of those arms, it would be best, except in a very close and rugged country, to leave the infantry with the main body. There should be as many guns with the rear guard as can be effectively used and freely maneuvered. The effective use of artillery may obviate the necessity of deploying the other arms of the rear guard, the deployment of the enemy at a distance being compelled by the fire of the guns. The fire of the artillery at short range should be as rapid as is compati-

ble with its cool and intelligent action: when the rear guard is pressed by the enemy, it is necessary to fire as many shots as possible, and still more necessary that each one should count. If it becomes necessary to abandon the guns, the equipments and breech-blocks should be carried away, and, if practicable, one wheel should be removed from each and run to the rear, so that if the pieces are recaptured they can be at once used. If there seems to be no hope of recovering the lost pieces, the guns should be burst and the caissons blown up; or, at least, the breech-blocks should be broken off, damaged, or thrown into a stream or well. The danger of losing a few guns must never be made an excuse for a premature withdrawal. If the guns, by remaining until the last moment, exact a heavy price in blood from the enemy, and contribute largely towards checking pursuit, they are profitably sold, and their loss is an honor.

The cavalry of the rear guard can charge bodies of the enemy that have been thrown into confusion by the ardor of pursuit, or by the fire of the artillery; but its chief reliance should be in dismounted fire action. It can take up almost any position that the infantry can, and thus compel the deployment and retardation of the enemy, while its superior mobility enables it rapidly to diminish the distance between the main body and the rear guard, always dangerously increased by a stubborn stand of the latter. Good cavalry of the American type is the life of a rear guard. A rear guard entirely without cavalry, except in a region where that arm can not be used, is at an enormous disadvantage, unless the enemy is also without mounted troops. In the retreat from Moscow, the destruction of Napoleon's cavalry by cold and starvation left the French rear guard exposed to the attacks of the Cossacks, who, though unable to break a single square of infantry, annoyed it incessantly, and cannonaded it with small guns brought up on sleds.

When a rear guard is composed of all arms, the infantry should be with the reserve, and the cavalry with the support and rear party. If the cavalry is not in sufficient strength for the entire support, the deficiency must, of course, be made up from the infantry. The artillery should be with the reserve; but horse artillery may sometimes accompany the support. The engineers should be at the rear of the reserve or at the head of the support. Machine guns may be used with effect by the rear guard, being always used defensively. They should generally be with the support.

The rear guard should, if possible, be entirely free from impedimenta, in order that, if separated from the main body by a considerable distance, it may close up by forced marches. If its baggage can not be sent forward to the main column, all that is not absolutely necessary should be destroyed, if the pursuit is vigorous, and the remainder kept with the reserve.

Plates XIV. and XV. show typical formations of a rear guard. It will be observed that the rear guard is merely a reversed advance guard with more flankers. Thus, in the case of a company of infantry (Plate XIV.), flankers are thrown out from the reserve. In the case of a troop of cavalry (Plate XV.), the reserve throws out a double patrol on each flank, similar to the one thrown out from the support in the case of an advance guard, the larger patrols being on the more dangerous flank. The support sends out flanking groups which march at a distance of about 600 yards from the line of march of the column. Ordinarily, a line passing through the point and flankers of an advance guard forms a semicircle: a similar line in the case of a rear guard forms about two-thirds of an ellipse. These typical formations are, of course, merely suggestive: they must be modified to suit the circumstances of each case. Rear guards

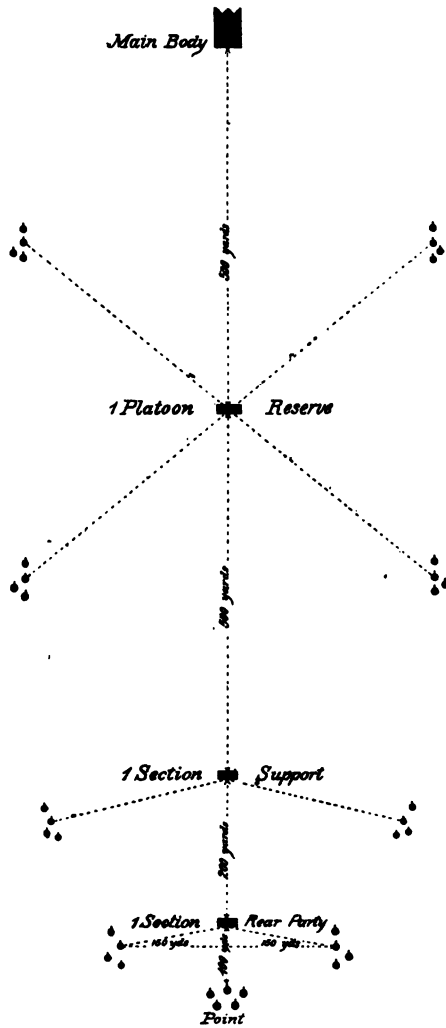
composed of larger bodies are similarly formed. In an open country the reserve may sometimes be advantageously formed in two parallel columns.

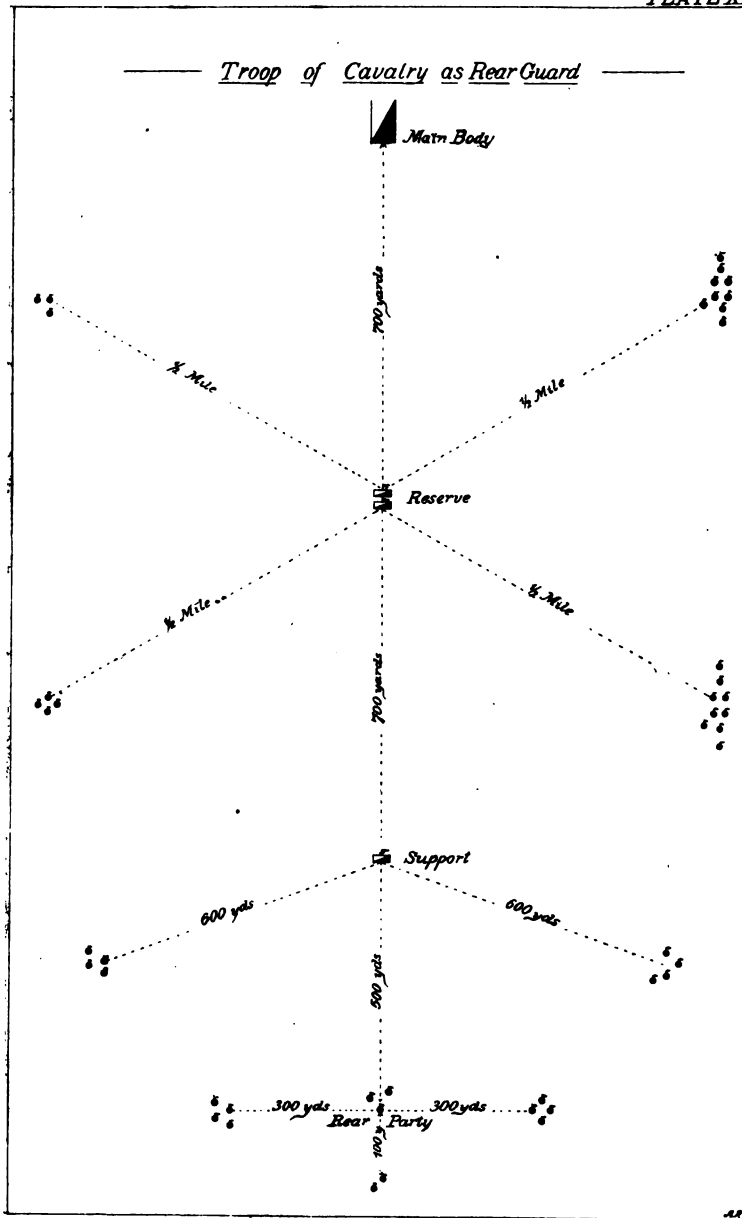
Withdrawal from Action.—The manner of withdrawing a rear guard from action will depend entirely upon circumstances. As a rule, only a portion should withdraw at a time, taking up, if necessary, a new position, to cover the withdrawal of the rest. The guns especially must not all withdraw at once, as the total cessation of artillery fire would betray the movement. Whether the withdrawal should be by alternate battalions, or whether it should begin at the center or at a flank, would depend upon the direction and progress of the attack and the topography of the field. Generally, the infantry and a portion of the guns withdraw first; and when they are again in position or *en route*, they are followed by the remaining guns and the cavalry. The withdrawal should never be a difficult matter if it has not been delayed too long.

Communication between the Several Parts of the Rear Guard and with the Main Body.—Uninterrupted communication must be maintained between the several parts of the rear guard and the main body. The road should be carefully marked, so that the rear guard may not lose its way. The trail of a retreating force is usually only too plain; but it is well to leave a patrol at cross-roads, etc., with orders to rejoin the main body as soon as the proper road has been taken by the rear guard. Similar precautions must, when necessary, be taken by the reserve to insure the proper direction being taken by the support.

Protection of Flanks.—Patrolling must be carried on with vigilance and energy, especially on the flanks. The enemy, finding a firm front opposed to all his direct attacks, will undoubtedly attempt to cut in on the flanks, where, in

Company of Infantry as Rear Guard.





fact, always lie his most promising hopes of success; for if he can cause the rear guard to form front to a flank, any assault by which it can be pushed off the road will uncover the rear of the main body, and will be only less disastrous to the retreating army than the destruction of the rear guard itself. Prompt notification of attempts against the flanks should be given by the patrols (who are often warned of them by a diminution of the enemy's forces following in rear), and the rear guard should then endeavor with celerity to slip past the menaced point; failing in this, it should form a strong front towards the attacking force.

Conduct of the Rear Guard.—If the two armies are of approximately equal strength, the rear guard will be about as strong as the advance guard of the force pursuing it, and the advantage of a good defensive position should give it a superiority over the latter. But this superiority will be only temporary at best; for the advance guard is receiving constant accessions of strength from the rear, while the distance between the rear guard and the main body of the retreating force is constantly increasing. Hence, the longer the rear guard remains in its position, the greater will be the odds against it. If it does not remain long enough, the enemy's advance will not be seriously delayed; while if it remains too long, it will suffer heavily in the engagement. In Massena's retreat from Portugal, Ney made the one error of his brilliant rear-guard operations, by remaining too long on the left bank of the Ceira, which mistake cost him five hundred men, though he succeeded in withdrawing the greater part of his force across the stream and blowing up the bridge.

The pursuing army will always be in more or less doubt as to the strength of the force which it finds barring its way, and it must act with prudence, or run the risk of a serious and

costly repulse. At Redinha, Ney, with a rear guard of about 5,000 men, made such skillful dispositions as to compel Wellington to deploy 40,000 men, and incur a delay of several hours. The morale of the retreating force is also a matter of uncertainty to the pursuers, and this consideration also forbids rash action. Sir John Moore at Coruña and McClellan at Malvern Hill each turned and gave his pursuer a knock-down blow at the termination of a retreat.

The rear guard has an advantage over the pursuing force in not being obliged to reconnoiter the ground over which it has to march. All necessary information as to the roads is furnished from the front, and a well-qualified staff-officer with the main body should select defensive positions for the rear guard, and furnish its commander with a description (and, if possible, a topographical sketch) of the same. The positions would be ridges, sunken roads, villages, woods, bridges, or defiles.

The rear guard must not be tempted by the great natural strength of a position to occupy it at the expense of being separated at too great a distance from the main body, nor to hold it so long as to become compromised in a regular engagement. The amount of resistance to be made by the rear guard will depend upon the judgment of its commander, or on the orders of the commander-in-chief. At very important positions, the latter should join the rear guard, if necessary, superintending its formation for resistance, or even conducting its action. Sir John Moore, on his famous retreat, personally directed the movements of the rear guard. This is generally neither practicable nor desirable; but the commander-in-chief should always know what his rear guard is about, and whether it is judiciously handled. He should, above all, see that it is never forced to fight superior numbers of the enemy at too great a distance from succor. It is

best, however, never to interfere with the commander of the rear guard, if he understands his business and performs his part properly. The nature of his duty requires that he should have even greater independence of action than the commander of an advance guard.

The Intermediate Body.—The advance guard of the pursuing force, its strength constantly increasing, can act boldly to the flank; and the rear guard is in danger of being intercepted, and finding a force of the enemy barring its way at some one of the positions selected for its own defensive stand. This danger increases with the stubbornness of the stand made by the rear guard. In view of these considerations, Rüstow recommends an important difference in the composition of advance guards and rear guards, by giving to the latter an intermediate body, which should march midway between the reserve of the rear guard and the main body. It would thus be in a position to hold important points until the arrival of the reserve, which points it might even have time to fortify, while preparing at the same time for the destruction of the passages at the selected positions. This intermediate body should have artillery, especially if the country is open and the enemy's forces are able to make turning movements with celerity. Rüstow recommends further, when the enemy shows a particular tendency to execute flank movements, with the intention of separating and cutting off the different detachments, and the country is such as to favor his movements, that the principal column leave a detachment to hold an important position until the arrival of the intermediate body. Under some circumstances, the detachments recommended by Rüstow might be imperatively necessary; but the system is open to the objection that the detachments, unless composed of cavalry, would be unable to rejoin the main body, which would thus be constantly reinforcing the rear guard. If composed of cavalry, they

might, perhaps, better be with the rear guard in the first place, and be sent forward to hold the positions in question. They would thus at least be continually and definitely under the orders of the rear guard commander.

Contact with the Enemy to be Preserved.—Contact with the pursuing force should not be lost, but its movements should be continually watched; otherwise the army might be flying from a mere phantom,* or it might be deceived as to the objective point of the enemy's attack. The enemy might continue the pursuit with a small force on the main route, and move the bulk of his army on a parallel road, whence, after making unobstructed progress to the front, he might move in to cut off the rear guard or assail it in flank. In Napoleon's retreat from Moscow, Miloradowitch, with a Russian advance guard of 25,000 men, moving on a road parallel to the French retreat, cut in between the main body and rear guard at Wiasma, and would have wrought irretrievable disaster to the retreating army if he had been properly supported by the main body of the Russians.

A similar movement was more effectively executed against Lee in his retreat to Appomattox Court-House. Pursuing on a parallel road, Sheridan, with the cavalry corps, cut in on the Confederate line of retreat at Sailor's Creek, interposing between the main body and the rear guard. Holding the latter in check until he was reinforced by the Sixth Corps, he compelled its surrender, capturing five general officers and all that remained of Ewell's corps.†

*History presents a number of instances of armies turning their backs upon each other in mutual flight. Thus Napoleon and Kutusoff both retired from Malo-Jaroslawitz; the troops of Braddock and Beaujeu both fled from the Monongahela, and the Federals and Confederates both retreated from Big Bethel.

†Gordon's corps originally formed the rear guard of Lee's army; but Gordon having been defeated by Humphreys and deflected to the right in retreat, Ewell's corps was left as the real rear guard of the retreating army.

If the pursuit seems to slacken or cease, contact must be maintained by strong patrols, each patrol generally consisting of a platoon under command of an officer. Small patrols could not drive back any but the most insignificant forces of the enemy, and could not, therefore, learn whether the pursuit were conducted by a large force or merely by small parties. The patrols should be given great liberty of action, and, after having been informed of the route to be taken by the main body in retreat, and given such general orders as may be necessary, they should be left quite independent of the rear guard. It will often be necessary to act vigorously on the offensive with the cavalry, in order to ascertain the nature of the pursuit. If the enemy's advanced troops, when repulsed, fall back upon larger bodies in rear, the enemy is evidently pursuing in force; if, on the contrary, they are driven back in rapid flight, and are not supported, the enemy either is not attempting a serious pursuit, or is moving on a parallel road.

Defiles.—Defiles offer the greatest opportunities to an energetic pursuer and to an able rear guard commander. To the former they afford a chance of cutting off the rear guard by interposing a force at the entrance of the defile. To the latter they afford a double opportunity of administering a check to the enemy, who is compelled to narrow his front. In defending a defile, the main body leaves a detachment to hold the heights on each side until relieved by the infantry of the rear guard. The artillery is generally stationed at the entrance of the defile, and the cavalry in the best position for dismounted fire action—always at that part of the line which is to withdraw last. As soon as the enemy has not only deployed for attack, but is well committed to the assault, the artillery fires its parting round of shrapnel, and withdraws rapidly through the defile, followed by the infantry. The

cavalry covers the withdrawal of the other arms, mounting at the last moment, and retreating rapidly through the defile, its retreat being protected, if practicable, by infantry skirmishers lining the crest on either side of the interior of the defile.

The outlet of the defile always affords a better position for opposing the enemy than the entrance; for in making a stand with a defile at its back the rear guard runs the risk, in case its flank is turned, of being cut off altogether. In making a stand at the farther side, the artillery is posted so as to rake the defile; and the infantry, so as to bring a converging fire on its outlet, detachments of infantry also holding the crest; while the cavalry is stationed so as to be able to charge the enemy in flank as he emerges from the defile. Enough of the enemy should be allowed to pass to enable the assault upon him to be more than a mere stroke at the head of his column; but the mistake of allowing too many to pass would be a fatal blunder. Here the judgment of the rear guard commander must come into play, and no rule or suggestion can aid him. The enemy having been severely handled and thrown back into the defile, the rear guard withdraws without delay.

If practicable, the position at the entrance of the defile should be convex towards the enemy, so as to admit of ready withdrawal by the flanks. At the outlet, the position should, on the other hand, be concave, so as to bring a converging fire upon the enemy.

Negative Measures.—The measures taken by the rear guard to delay the enemy may be classed as positive and negative; the former relating to the delays caused by actual or threatened combat, and the latter including all measures to impede his progress by blocking his path, destroying bridges, etc. The positive measures have already been con-

sidered: the negative measures are diverse in their nature, and afford a wide field for ingenuity. Bridges may be burned, blown up, or torn down. In the first case, if time permits, the timbers should be coated with tar, or saturated with coal oil, by troops from the main body or the reserve, and fired by the last men of the rear detachment who cross; in the second case, the charge should be similarly placed and exploded; and in the third case, the planks should be loosened by troops in advance, and thrown into the river by the rear point. In all cases, the preparation for destruction should be made by the main body or reserve, and the consummation should be the work of the last men who cross. Loaded shells placed under the heaps of combustibles would, by bursting at intervals, prevent the enemy from approaching to extinguish the flames.

Fords can be obstructed by planting therein pointed stakes, broken bottles, or harrows, plows, and scythes, so arranged that the sharp sides and points are uppermost. Another expedient is to throw in trees with the branches towards the enemy and weighted down with stones in sacks. In addition to these measures, the banks may be scarped, and an epaulement with artillery established on the side opposite the enemy. Boats should be taken to the far side and either burnt or sunk. Roads can be obstructed by felling trees across them, or blowing up the road-bed; and gateways and passages can be blocked with heavily laden carts dovetailed together, one wheel being removed from each.

Villages may be fortified in some cases, but generally it will be more expedient to burn them, and thus place a barricade of fire, so to speak, between the rear guard and the enemy; but this measure will, manifestly, be of value only when the enemy is following close upon the heels of the rear guard. Thus Ney burned Redinha and Condeixa in the

face of Wellington, delaying him in each case. The commander-in-chief should give general instructions as to the extent to which bridges, villages, etc., are to be destroyed, and no wanton or unnecessary destruction should ever be permitted.

Other expedients will suggest themselves to a good commander. Of Johnston's retreat to Jackson, Miss., in 1863, General Sherman, in his "Memoirs," says: "On the 8th [July], all our troops reached the neighborhood of Clinton, the weather fearfully hot, and water scarce. Johnston had marched rapidly, and in retreating had caused cattle, hogs, and sheep to be driven into the ponds of water, and there shot down; so that we had to haul their dead and stinking carcasses out to use the water." Any means of producing suffering and inconvenience to the pursuers, such as to cause them to delay, should be resorted to by the rear guard, stopping only at such measures as are condemned by the laws of war.

But these negative measures are, after all, merely helps, and the safety of the retreating force must depend upon the resolute action of the rear guard itself. When it is essential that the army should put distance between itself and the enemy, the rear guard must make use of every good defensive position to delay the pursuers; but no halt should be made for fighting when the necessity of checking the enemy and gaining time is not imperative.

Sick and Wounded.—The rear guard should collect all stragglers and compel them to move on, and it should not allow the sick or wounded to be left behind, unless they prove a dangerous encumbrance. When necessary, transportation must be requisitioned for the sick and wounded, and they should, if practicable, be sent forward to the main column every night. When it is found necessary to aban-

don them, they should be formally transferred to the authorities of some village or town, and one or more medical officers, with a liberal supply of medical stores and money, should be left with them. With the exception of such medical supplies, no stores of any description that could be of value to the enemy should be left behind; what can not be carried along must be destroyed.

Halts.—When the rear guard halts, it chooses a good defensive position, and establishes its outposts towards the enemy. It is desirable that the position should not only be strong, but that it should command an extended view. On halting for the night, the rear guard should, when practicable, be relieved by other troops. The new guard should be halted at a suitable distance from the point selected for the camp or bivouac of the main body, and established as an outpost. When it is passed by the old rear guard, the former assumes its duties, and the latter joins the main column. In the case of either an advance guard or a rear guard, the distance of the outpost from the main body will depend mainly upon the time required for the troops to turn out and form at the designated rendezvous;* in the latter case, however, the time required for the longest column to march out in resuming the retreat must be added, no allowance being made for time gained by the resistance of the rear guard. The distance of the outpost from the main body will, therefore, be greater in the case of a rear guard than in the case of an advance guard.

Retreating by Parallel Roads.—When an army is retreating by several parallel roads, each column will have its own rear guard, each rear guard having its own chief, and all being united, when practicable, under the command of one common superior. Connection should be maintained be-

*Provided, of course, that the distance is not determined by considerations of artillery fire.

tween the several columns, and between the different rear guards, by connecting groups or patrols. If retreating by a single route to which several other roads are near and parallel, it may sometimes be advisable to place a secondary rear guard on each. This would practically amount to a subdivision of the rear guard, which should, consequently, be of a greater strength proportionately to the main body than would otherwise be the case. The necessity for these secondary rear guards would be greatest when there were many lateral roads joining the parallel routes, and such roads, conversely, would be necessary in order that a secondary rear guard might not be left entirely without support. Generally, vigilant scouting to the flanks will obviate the necessity of secondary rear guards.

When Line of Retreat is Changed.—When the line of retreat is changed, it may sometimes be advantageous to leave the rear guard on the old route for the purpose of deceiving the enemy. Artillery should then accompany the rear guard, not only to add to its defensive power, but to give it the appearance of a force of respectable size. A small rear guard should follow the main body in the new direction.

Rear Guard in Retrograde Movement which is not a Retreat.—It is not only in a retreat that a rear guard becomes necessary for the purpose of holding the enemy in check. A retrograde movement may be designedly made for the purpose of leading the enemy into a theater where the conditions will be more favorable for the retiring army; or a movement may be undertaken against one of the enemy's armies in such a way as to expose the rear to another. Thus, in Wilkinson's march against Montreal, in 1813, a rear guard was necessary for the protection of the American army from the attacks of the British from Kingston, though the enemy was sought in the opposite quarter. In the first case, the

rear guard would be conducted in the manner already described. In the latter (unusual) case, the advance and rear guards would be of equal importance. In the latter case, in fact, it would be better to leave a containing force to hold one of the hostile armies in check while proceeding against the other.

Rear Guard in a Friendly Country.—In a movement in a friendly country the duties of the rear guard are much less difficult and onerous than in a hostile one. In the former, the rear guard easily finds subsistence; guides are obtained without difficulty; the inhabitants aid in obstructing or destroying roads and passages; they assist in enterprises against the enemy; and they remove all supplies upon his approach.

In a Hostile Country.—In a hostile country, however, foraging is difficult for the rear guard, as it must pass over a country already exhausted by the main column; and the inhabitants, far from rendering assistance to the rear guard, are ever ready to turn against it, and are quite sure to throw all manner of annoying obstacles in its way.

THE REAR GUARD IN A FORWARD MARCH.

The rear guard should never begin its march until all the baggage has moved off. The provost-marshal and provost guard generally march with the rear guard, which takes charge of all prisoners arrested by them. No duty is more disagreeable than that of a rear guard in a forward march. Wolseley says of it:

“It is sheer hard work, without any excitement or glory. Under the most fortunate circumstances the men composing such a rear guard can not expect to be in camp for some hours after the main body. It is most fatiguing to march in the

dusty wake of an army, but it is on such occasions that officers show their true metal; any man can be cheerful and zealous with an advance guard, or even with a rear guard during a retreat, but it is only those who have the keenest professional feelings who can throw all their energies into every little duty, irrespective of its being agreeable or otherwise.”*

If marching in a hostile country, the rear guard is charged with the protection of the baggage from the forays of guerrillas, and if the country is suited to partisan warfare, and the enemy's raiding parties are enterprising, its duty greatly increases in importance. It should carefully watch the flanks of the baggage train with patrols, of a number and size suited to the danger to be apprehended, and should be ready to repel attacks on the flanks as well as on the rear of the train.

*“Soldiers' Pocket Book,” page 346.

CHAPTER VII.

SPIES.

Too much attention can not be given to spies and guides. Montecuculi says that they are as necessary to a general as the eyes are to the head.—*Marshal Saxe.*

Although the method of gaining information from spies, deserters, prisoners, newspapers, etc., does not strictly belong to the domain of tactics, it seems too important a subject to be omitted from consideration in this work. The questioning of deserters and prisoners has already been considered in the chapter on "Reconnaissance"; the other methods require additional notice.

Spies may be primarily divided into two classes: *military* and *civilian*. The first class consists of officers or soldiers who, from patriotism or a sense of military duty, assume a disguise, and penetrate the enemy's lines to gain information. They are often men of the most exalted character and distinguished courage, and deserve a better fame, and a better fate if captured, than that usually accorded to spies. To this class belong Captain Hale and Major André; and the War of Secession adds to the list two names more illustrious and more successful. General Nathaniel Lyon visited in disguise the Confederate camp near St. Louis the day before he attacked and captured it; and Colonel Turner Ashby, in the guise of a country horse-doctor, visited the Union camp at Chambersburg, in 1861, and returned safely with a great deal of valuable information.

The second class consists of men who often deserve all the obloquy so freely cast upon spies in general; though in-

stances are not lacking of civilian spies actuated solely by motives of disinterested patriotism. But whatever may be their motives or individual characteristics, spies are indispensably necessary to a general; and, other things equal, that commander will be victorious who has the best secret service.

The services of spies are most valuable during the concentration of armies on the theater of operations, and during the investment of fortified places. During active operations, the information brought by them, however accurate it may be, generally arrives too late to be of much value.

Spies should be carefully selected from people whose occupations are such as to enable them to enter the enemy's lines without exciting suspicion; such as peddlers, drivers of public vehicles, strolling players, etc. Women are often the best of spies; but their means of gaining information is generally in direct proportion to their lack of character, and accordingly proportionate to their lack of credibility.* A marked expression of distrust on the part of his employers may sometimes protect a spy from the enemy's suspicion. In 1863, General Hurlbut expelled a man from Memphis for uttering disloyal and threatening sentiments. The fact of his expulsion under the circumstances recommended him to the favorable consideration of Johnston, to whom he offered his services as a spy. The expulsion had been a mere ruse; and, some months later, the man brought to Grant an important message from Johnston to Pemberton, which placed the Union commander in possession of his opponent's plans.

*"Les femmes galantes et surtout les filles publiques servent beaucoup dans l'espionnage, quand elles offrent quelques garanties de fidélité. Le général von Decker dit à ce sujet: Si le partisan sait acquérir de l'influence sur les femmes, il se gardera de négliger ce moyen; c'est à ce sexe qu'il devra ses renseignements les plus certains. Un secret qui ne peut se savoir ni par les femmes ni par les hommes d'église, ne se révélera probablement jamais."—*Lewal, "Tactique des Renseignements," Tome I., page 105.*

A spy should be intelligent, conscientious, and faithful—qualities hard to find in a man whose very occupation bespeaks habitual deceit and a want of principle—and in proportion to his possession of these characteristics will he be valuable. The motives which induce him to play the part of a spy should be ascertained. Men banished from their country, smarting under a sense of injustice, exasperated by ill-treatment, embittered by jealousy, or influenced, in short, by any strong passion calculated to incite a spirit of hatred and revenge against the enemy, are almost certain to be faithful and energetic spies. Spies should always, when practicable, be tested with unimportant missions before being entrusted with matters of great moment. It is a good plan to require them at first to report upon matters that are already known, as a means of testing their reliability and accuracy. The services of a spy permanently attached to a command are likely to be much more valuable than those of one who is employed only for the single occasion, and whose efforts are not stimulated by a hope of profitable employment in the future.

It is clear that the only trustworthy spies are, as a rule, those who serve voluntarily; nevertheless it is sometimes necessary to force men to act as spies for a particular object and on a single occasion. Bugeaud thus describes the system of which he himself made use in Spain, but which certainly should not be copied unless circumstances were so extraordinary as to justify its brutality:

“When spies are lacking to procure news of the enemy, to carry letters to a distance through the hostile lines, or to gather information by visiting places occupied by the foe, rich countrymen should be taken from the villages passed through, and having been given a certain mission, they should be threatened with the burning of their houses and

captivity of their wives and children if they fail to execute their charge faithfully. This is a good method of giving false information to the enemy. To this end, the messenger is given letters containing the misleading statements, addressed to the commandant of some place, or the chief of some body of troops supposed to have arrived at some point which is still occupied by the enemy. The countryman goes thither; he is captured; his letters are read, and the ruse rarely fails. Well-to-do countrymen are better adapted to playing this part than men of a higher class, because they value more their little possessions, are more hardened to fatigue, and patriotism is a sentiment less developed in them than in the superior classes. Moreover, they awaken less suspicion. If inhabitants are not to be seen, as often happened in Spain, it will be necessary to drive along the cattle that are found. Their owners will not fail to come to claim their animals, and they can be compelled to ransom them by service as spies; being warned that their herds will be restored to them only when the information brought in is verified. With the same object in view, hostages may be captured during the night in a town or city near the enemy."

The fidelity of a spy depending entirely upon his individual interests, he must, even if apparently devotedly faithful, be regarded with suspicion. His safest and most profitable rôle is that of a "double spy"; that is, one who is engaged in carrying true information to both armies. For fear that a spy may be playing this double part, he should always be halted at the outposts, or even be met at a designated place beyond them. It is a good rule to go to meet the spy, instead of having him come in to report. This rule, which is practicable whenever the time of the spy's return can be foretold, subserves another good end; for there are often men who are willing to act as spies, but who are afraid or ashamed to be

known as such, even among friendly people. Such men would willingly render their reports at some isolated rendezvous, while they would dread to be seen entering the camp.

Double spies are often of great value. Prince de Ligne even declares that they are the best. But he adds that it is necessary to deceive them in order that we may not be deceived by them, and to make a false movement in order to test them. It can then be seen whether, after allowing the spy to learn of the movement, the enemy is informed of it. If he is, the spy should not be hanged, but should be confined and compelled to send false news to the enemy. False information should be communicated to a spy only by an authorized officer having full knowledge of the true plans and conditions. Any uninstructed officer taking it upon himself to disseminate false news might unwittingly give true information, and cause incalculable mischief.

Nothing intrusted to a spy should be put in writing, unless it be false information intrusted to a double spy. All other messages should be either verbal or expressed in cipher. The message should be closely written on fine paper and inclosed in a small quill, which could be concealed in the hair or beard, or enclosed in a hollow bullet, which could be fired away if capture seemed unavoidable. A still better plan, perhaps, would be to write the message in lemon juice on the margin of some book, such as a Testament or prayer-book, which the spy might carry without exciting suspicion. Exposing the leaf to heat, or passing a hot iron over it, would then bring out the writing. The dispatches carried by Campbell (one of Sheridan's spies) were closely written on tissue paper, rolled up in tin foil, and concealed in a quid of tobacco in his mouth.

A spy should never be allowed to see that he is mistrusted; but should be led to believe that particular confi-

dence is reposed in him, and that his services are regarded as especially valuable. At the same time, other spies should be employed to cover the same ground, and their reports should be carefully compared. The same rendezvous should not be assigned to different spies on their return, as they would thus become acquainted with each other, and might conspire to bring in false news, or one might be betrayed to the enemy by another. In rare cases it may, however, be practicable to employ spies in pairs. In Tennessee, Sheridan employed the three brothers Card as spies; two of the men working together, while the third remained at headquarters, available for duty in case of mishap to the others, or in case Sheridan wished to communicate with them.

When a spy leaves the post, camp, or bivouac, he should be escorted beyond the outposts by an officer or non-commissioned officer, who should give only such information about him as may be necessary to insure his safe exit. When a spy comes in, he should be halted by the sentinel, and conducted to the nearest picket, where he should be retained under charge of the picket sentinel while awaiting the orders of the officer for whom he inquires. While at the picket, the sentinel should see that he communicates with nobody. A spy should always, if practicable, be assigned to the same officer, mutual acquaintance being essential to complete mutual understanding. A good spy often acquires a feeling of friendship and devotion for a chief who always sends him out, who always receives his reports, and (above all) who always rewards him. A spy must always be well paid. He is usually working for money, and for money alone. A badly paid spy will generally strike a bargain, sooner or later, with the enemy. Communication with a spy should never be made through an interpreter, if it can be avoided. His information may be misinterpreted, and he will fear mis-

representation. Liberal pay and kindness should chiefly characterize the treatment of spies, though they should be treated with firmness, and held to the faithful performance of their duties. Threats should never be used. If the spy is offended, he can easily leave, or perhaps turn traitor. If his conduct has been so suspicious as to warrant a threat, it has been bad enough to justify his arrest.

A spy's abilities should always be considered, and too much should not be required of him. If charged with ascertaining too many things, he will probably bring back a confused report. Unless he be an exceptionally able man, he should be directed to ascertain only certain definite things. It is, consequently, necessary to employ many spies, and to assign to each a particular mission, giving them only such things in common to report upon as may enable them to act as a check upon each other. The questions to which the spies are to find answers will depend upon circumstances. The following ones, of general application, should always be kept in view:

1. Where are the headquarters?
2. At what place are the different generals? What are their names, and what is the character of each?
3. What are the numbers and strength of the corps in each position, and how many guns with each?
4. Is the enemy concentrating or dividing his forces?
5. What are the measures taken for subsistence and transport?
6. How are the enemy's troops clothed, fed, and paid? What is the state of their morale? How large is their sick-report? What is the mortality among them? What are the prevailing diseases?
7. Is the enemy moving? If so, the entire army, by corps, or by detachments?

8. Is he awaiting reinforcements? Whence are they coming? What kind of troops are they? When are they expected?

9. Is he fortifying? If so, on what points?

When the army is engaged in active operations, it may be a difficult matter for a spy to find the officer or the headquarters to which he should report; and it may not be easy for him to establish his identity as a *bona fide* spy, when he arrives at the outposts or meets an advance guard, unless some general device has been adopted beforehand. In 1870-71 each German spy wore a small medal, similar to a religious medal, around his neck, under his clothes. Wolseley suggests that each spy should carry "a coin of a certain date, a Bible of a certain edition, a Testament with the 3d or 7th leaf torn out," etc., etc.

Spies sometimes remain in a certain locality, and send information, often through the ordinary channels of communication, in regard to the enemy's movements and preparations. These communications, either telegraphic or by letter, may often be couched in commercial language, and sent to persons in a neutral country, by whom they are transmitted to the officials for whom they are intended. Such is the present perfection of telegraphic communication, that it would be practicable for an American spy in Quebec to send a disguised telegram to Hamburg, and have the information contained therein telegraphed *via* New York to an American army on the St. Lawrence not later than the following day. Spies can, with a small pocket instrument, tap the telegraph wires and gain valuable information by means of the messages passing. This information can then be forwarded to the army by means of mobile spies, or under disguise through neutral territory. Officers or trusted agents should always be posted in a neutral country for the purpose

of transmitting promptly to the headquarters of the army such news of importance as they may there learn.

Thus far we have considered only the employment of spies against the enemy. We must now consider the measures necessary to guard against espionage on his part. The mischief that may follow carelessness in this respect is well shown by Lewal in the following incident:

"A stranger presented himself, giving false, but specious, news of the Germans. He was listened to; he gained the confidence of the French; he went without hindrance to the center of the army, even to headquarters. He saw all there was to be seen, and returned to the enemy under pretext of going in search of further news. He never returned. At daybreak the enemy, well informed by him of our positions, attacked. A great reverse for us followed. It was a case of a German spy whom nobody had suspected."

When the presence of the enemy's spies is suspected, the soldiers should be warned against intimate association with the inhabitants, and should be instructed not to answer any questions relative to the army or its movements asked them by strangers. Strangers caught giving liquor to the soldiers should be at once arrested and subjected to a rigid examination.

Vigilance at the outposts will do much to keep spies away; but the necessity of allowing inhabitants to pass often gives admission to spies. When Napoleon was bivouacked on the Danube, opposite Essling, some Jews came into the French bivouac ostensibly to bargain for the hides of the animals slaughtered for the subsistence of the troops. It afterwards transpired that they were spies of the Archduke Charles. People on such alleged mercantile errands must be carefully watched, as well as persons on supposed religious missions. Beggars, peddlers, itinerant preachers,

and strange women should be objects of suspicion, and should not be allowed to approach the camp or bivouac or to remain in the vicinity of the troops.

A spy may often be detected by his obsequious politeness, by his having plenty of money with him, by his liberality in "treating" the soldiers, by his extreme care to observe all the regulations of the camp, by his presence everywhere where military movements are taking place, by his manner of looking and listening while trying to seem not to do so, by his assumed air of extreme frankness, and by his promptness in producing papers to establish his innocent and worthy character.

When a spy is captured, he should be carefully searched, his clothes ripped apart, the soles and heels of his shoes cut open, and his buttons examined. If he is suspected of having about him papers which are not discovered in the search, his clothing should be burned. His hair, beard, and mouth should be searched; and if he is armed when captured, his cartridges and revolver should be carefully examined. If he is suspected of having swallowed a dispatch, he should be given an emetic.

The management of the secret service of an army requires a profound insight into human nature, and an ability to estimate at once the military worth of the information brought in. The chief of the secret service should be a peculiar combination of detective and general; it is not sufficient that he should be a detective alone. The chief of McClellan's secret service was a well-known and skillful detective; yet that general seemed to be, to an unusual degree, the victim of misinformation in regard to the movements, and especially the numbers, of the opposing army. The Regulations for Troops in Campaign now prescribe that the provost-marshal-general shall superintend the secret service.

NEWSPAPERS.

In time of war much attention should be given, at the headquarters of an army, to the newspapers of the enemy and to those of neutral countries; for much valuable information may thus be obtained. It is said that, in 1796, Moreau first received intelligence of the reverses of Jourdan from the columns of a German newspaper; and it is known that in the Franco-German war, when MacMahon attempted his disastrous march to the relief of Bazaine, the first news of this important movement came to Von Moltke through the French and English newspapers.

With the increasing means of gathering and transmitting news, and with the constantly growing popular demand for late and complete information, the trouble created in military operations by the mischievous energy of newspaper reporters will, more than ever, justify the characterization of such correspondents as "the plague of modern armies." Such is the power of the press in the United States that an attempt to banish newspaper correspondents from an American army would probably do more harm than good; but it does not seem impracticable to place restrictions upon the unavoidable evil, and even, in some cases, to turn it to practical use. No correspondent should be allowed to accompany the army, unless provided with a license signed by the Secretary of War, on which should be an agreement, signed by the correspondent and the managing editor of his paper, not to violate any orders relative to correspondence that might, from time to time, be issued by the commander of the army.

An officer should be detailed as press censor. He should exercise a general supervision over all the accredited correspondents, and should satisfy himself as to the propriety of all newspaper dispatches before allowing them to be sent.

Any correspondent known to be discreet, subordinate, and trustworthy should be freely given all news of proper nature at headquarters; but mischievous ones should be promptly deprived of their licenses, and otherwise punished according to the nature and degree of their offense.

It is impossible to prescribe hard-and-fast rules for the government of the newspaper reporters accompanying an army; but regulations of some kind must be adopted to hold in check the mischievous gossip of those correspondents who would unhesitatingly imperil the safety of the army for the purpose of getting ahead of their rival reporters with some item of news. "Complete and unfettered freedom of the press is incompatible with a state of war."*

It is not merely the metropolitan newspapers that work the mischief, but the petty local press as well.

"Of course," says Von der Goltz, "even the best-informed paper will neither be able nor willing to make known the position of its party in all its entirety. But, even here, what is worth knowing is composed of many petty details. Other flashes of light have often so far lit up the picture of the enemy's doings, that only a breath of wind is still wanting to rend asunder the thin enshrouding veil of mist. The presence of a high commander is mentioned, a letter published, in which the writer mentions a division of troops and its station, or narrates a deed of arms, exactly describing all the circumstances, the regiments, and commanders. Each detail by itself is perfectly unprejudicial, but may yet serve as a valuable link of a chain that at last leads to its aim.

* * * The national press can not in war-time be sufficiently warned to caution. The demand for news must be decidedly suppressed in its disastrous effects, much as, on the other hand, it must, in consideration of the feeling of the

*Bronsart von Schellendorf.

country, be treated with regard. It would be better to trust reliable persons with the spreading of the news that is worth knowing to the country, than, by attempting to close all sources of communication, to incite unqualified and unreliable persons to independent action."

It may sometimes be practicable to lead the enemy into error by giving the newspaper correspondents incorrect information. This misinformation will do no harm to the reading public at home, and it may produce great results in the field. This ruse must not, however, be too frequently attempted, as the correspondents, who are invariably men of alert intelligence, would cease to fall into the trap, and might feel justified in smothering the official news in a mass of sensational conjecture, which they might succeed in smuggling past the press censor.

When a newspaper has incurred the displeasure of the commander by the nature of its correspondence, the punishment should, except where the fault manifestly lies with the editorial management, fall upon the correspondent individually, and not upon the newspaper. Instead of denying the paper the privilege of having a correspondent with the army, it should be notified that it could retain that privilege only by sending a new man in place of the offending reporter, who should be expelled from the army, or otherwise punished according to the nature of his offense. But the problem of dealing with correspondents is a difficult one, and it must be solved by the commander according to the circumstances of each case. The chief objects to be considered in regard to the newspapers in war are, to derive the greatest possible benefit from the indiscretions of the correspondents with the enemy's armies, and to prevent similar indiscreet publications by the reporters with our own.*

*For illustrations of the annoyance caused by newspaper correspondents in the War of Secession, see "Battles and Leaders of the Civil War," Vol. I., page 141; Sherman's "Memoirs," Vol. I., page 232 *et seq.*; and Grant's "Memoirs," Vol. II., page 143, *et seq.*

CHAPTER VIII.

ORIENTATION AND MAP-READING.

The conduct of patrols, reconnaissances, partisan corps, and in general all the operations of war, require that military men of all grades should understand orientation, and be familiar with map-reading.—*Von Witzleben.*

Orientation is the art of determining the points of the compass at any place where the observer may be.

It is effected:

1. By means of the magnetic compass;
2. By observing the sun;
3. By observing the moon;
4. By observing the North Star;
5. By means of maps; and
6. By means of indications.

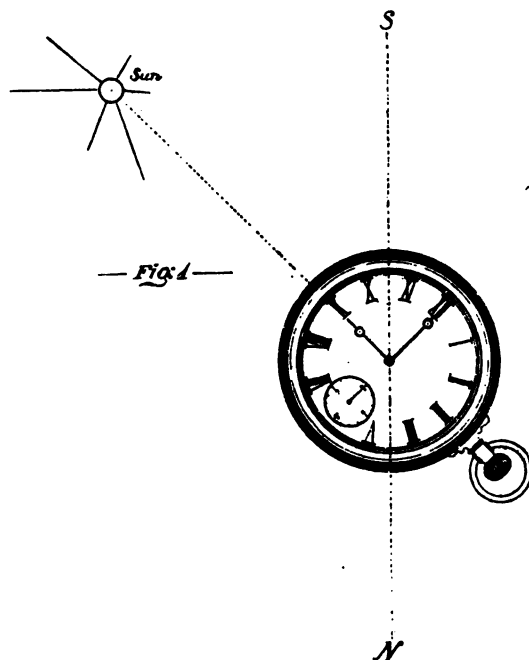
Orientation by means of the compass scarcely needs explanation. It is well known that the needle points north. Facing, then, towards the north, a right face, left face, or about face will cause the observer to face towards the east, west, or south. Care should be taken that the needle is not affected by the proximity of weapons, or other objects of iron. For ordinary purposes of orientation, the variation of the compass may be neglected. All the ordinary methods of orientation are, in fact, the rough expedients of the practical soldier, and not the scientific calculations of the astronomer.

Orientation by observing the sun can give only an approximation to correct results. Roughly speaking, the sun is in the east at 6 o'clock in the morning, in the south at noon, and in the west at 6 o'clock in the evening. This method of

orientation requires that the hour be known. If the observer is without a watch, the time of day can be judged approximately by the height of the sun in the heavens. To judge correctly requires practice; no rules can be given. If the observer knows approximately the time of sunrise, and knows the distance traveled since that hour, this distance divided by the usual rate of march will give the hours marched, and, consequently, the time of day.

The sun passes over an arc of 15 degrees in an hour. At 11 o'clock the shadow cast by a vertical stake will be west of the meridian, and will make an angle of 15 degrees with it. If then a line be drawn to the eastward of the shadow and at right angles with it, a division of this angle into three equal parts will enable the observer to lay off an angle of 15 degrees east of the shadow, which will give the meridian line. At 10:30 o'clock the right angle should be bisected. At 10 o'clock an angle of 30 degrees should be taken, and so on. In the afternoon the meridian line should be drawn correspondingly to the westward of the shadow. But all attempts at orientation by observing the sun are scarcely more than guesses, unless a timepiece of some sort is at hand.

When the sun is shining, a watch answers the purposes of orientation as well as a compass. While the sun is passing over 180 degrees (from east to west), the hour hand of the watch passes over 360 degrees (from 6 o'clock to 6 o'clock). Consequently, the angular movement of the sun in an hour corresponds to the angular movement of the hour hand in half-an-hour. If, then, holding the watch horizontal, we point the hour hand in the direction of the sun, a line from the pivot of the hands to the point midway between the hour hand and XII will point to the south. To illustrate: Suppose that it is nine o'clock in the morning. Following the rule given above, we find the south as indicated in Figure 1.



Orientation by observing the moon is more difficult and not very reliable; it depends upon the quarter in which the moon happens to be.

The full moon is in the east at 6 o'clock in the evening, in the south at midnight, and in the west at 6 o'clock in the morning.

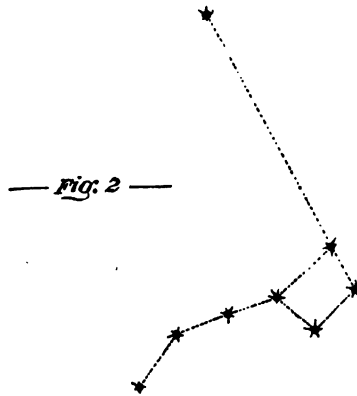
The moon in the first quarter is in the south at 6 o'clock in the evening, and in the west at midnight.

The moon in the last quarter is in the east at midnight, and in the south at 6 o'clock in the morning.

These indications, except the first, may vary an hour or so earlier or later.

The moon in the first quarter has the concavity to the left. In the last quarter the concavity is to the right.

Orientation by observing the North Star is one of the easiest methods. In whatever position the constellation of the Great Bear, or the Dipper, may be, the line joining the "pointers" will, if prolonged to about six times its length, pass nearly through the North Star, which can be readily recognized by its brilliancy. (See Fig. 2.)



Orientation by map is altogether the most satisfactory. The north is generally at the top of the map; if not, it is indicated by the direction of an arrow or similar symbol. Having a map, and being on the ground represented by it, all that is necessary is to place any line on the map in the same direction as a corresponding line on the ground, and the map will give the direction of the points of the compass. Any line may be chosen, such as a portion of a road or railroad, or a line joining two prominent landmarks.

Orientation by Indications.—If compass and maps are lacking in cloudy weather, or at night, the points of the compass may be found by various indications. In the Northern Hemisphere the moss on stones and trees is found thickest on the northwest or north side. Walls are damper on the north than on the south side. The bark of trees is most

deeply wrinkled on the north side. In stumps of trees it will be observed that the rings of annual growth are wider on the south than on the north side. Vines are trained on the south side of walls. Headstones in cemeteries are generally at the west end of graves. Weathervanes are often marked with the points of the compass.

MAP-READING.

Quick and accurate map-reading can be acquired only by practice. This practice can be obtained by going to the ground represented, and orienting oneself with the map. Pacing the distance from one object to another, the result should be compared with the distance between the same objects as indicated on the map. At each cross-road or fence delineated on the map, the angle made with the road should be estimated or measured, and compared with the angle represented. The actual appearance of all hills or natural features should be compared with the cartographic representation, and this practice continued until an examination of a topographical map gives to the mind a clear conception of the actual appearance of the ground represented. The best way to learn to read a map is to learn to make one; which knowledge can be acquired by the study of military topography.

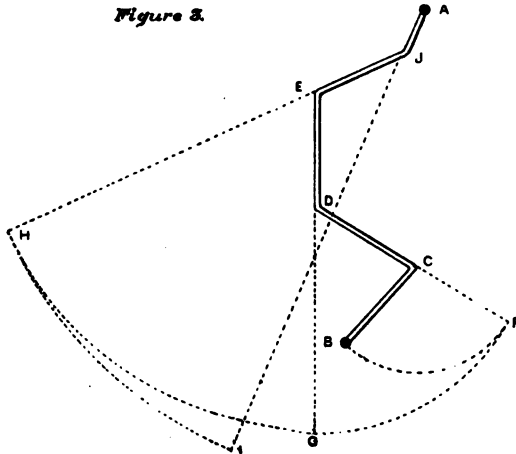
To ascertain the distance between any two points on the map, take the distance as indicated by a pair of dividers, and apply it to the scale given on the map. If the distance is too great to be measured with a single span of the dividers, or greater than the length of the given scale, draw a straight line in pencil on the margin of the map, or on any convenient paper, and lay off the distance thereon. Then adjust the dividers to any suitable portion of the scale (say 1,000 yards) and see how many times the adjusted span is contained in the

space marked off. If there is a remainder, apply it to the scale. The quotient multiplied by the number of yards represented by the span, plus the number represented by the remainder, will indicate the distance measured.

The distances measured along roads are rarely on a straight line. The best method of measuring such distances is as follows:

Let it be required to find the exact distance from the point B to the point A on the map, measured along the road

Figure 3.



B C D E J A. (See Fig. 3.) Placing one foot of the dividers at B and the other at C, we get the distance between these two points. Without changing the opening of the dividers, we leave one foot at C, and swing the other around on the prolongation of the line D C, where it falls at some point F. Extending the other foot of the dividers to the point D, we find $FD = BC + CD$. Swinging the foot at F around in prolongation of E D, and extending the foot at D to E, we find $GE = BC + CD + DE$. In a similar manner we find $HJ = BC + CD + DE + EJ$, and finally $AI = BC + CD + DE + EJ + JA$. Applying the distance A I to the scale on the map, we have the distance *by road* from B to A.

CHAPTER IX.

INDIAN SCOUTING.

It must be emphatically asserted that there does not exist, never has existed, and never, except by pedants, of whom the most careful students of war are more impatient than other soldiers, has there ever been supposed to exist, "an art of war" which was something other than the resultant of accumulated military experience.—*Maurice.*

As contributing to a demonstration of the fact that sound theories of war are simply the accumulations of experience, it is interesting to note the essential points in common possessed by the scouting methods of European armies and those of the Indians, who, far from knowing anything about European warfare, are ignorant of the existence of Europe itself. It will be sufficient to consider the methods of the Apaches and the Sioux.

Unlike the other Indian tribes, the Apaches are essentially foot-soldiers. They often use great numbers of horses on their raids, but they never fight mounted, their horses being used merely as a means of transportation from one point to another. As warriors, they are formidable only when afoot, and as scouts they are seen at their best when acting as *small infantry patrols.*

During the wars in Arizona during the past decade, the ordinary methods of an Apache company in the field against hostile Indians were about as follows: The scouts were up and on the alert before the earliest signs of dawn; and, having received their instructions as to the next camping-place, and especially in regard to "ranches" inhabited by white men (by whom they were likely to be fired upon, if they ap-

proached unaccompanied by troops), they started out from camp, spreading out like a fan, in groups of three, and pushing on so far ahead of the troops that the latter rarely saw them until camp was reached, or the trail became so hot that word was sent back to the column. The patrols reconnoitered the country in the most thorough manner for about five miles on each side of the trail, and absolutely nothing escaped their notice; tracks, broken branches, upturned stones, ashes of camp-fires, horse-dung—in short, everything, being commented on, and, if deemed important, reported to the commander of the column by one of the party. If less than three men remained of a party, it always united with another, an Apache dreading to be alone.

As soon as camp was made (generally about 1 o'clock p. m.), the scouts, without instructions being given, encircled the camp with an outpost line, which nothing could approach without being seen. As soon as it became dark, everyone came in and went to bed, the horses were turned out under soldiers for night-herding, and the camp slept securely, because it is a cardinal principle with the Apaches never to attack at night. This peculiarity of the Apaches is by some attributed to the extremely rough country covered with cactus and prickly pear; by others, to superstition. Whatever the cause, it seems to be an invariable rule. The earliest gray of dawn always found the outposts reestablished, the herd in (or the guards about it quadrupled), and the men under arms.

The methods of these scouts were in all respects essentially the same as those of the hostile Indians to whom they were opposed.

The Apaches show a surprising skill in the selection of positions and in the measures taken for defense. An officer of experience says:

"In the field against Victorio for two years, I never saw one of his camps that did not astonish me with the splendid means of defense against any opponent coming in any direction, and the absolute impossibility of sudden surprise guaranteed by his arrangement of outposts. * * * * In his own country the Apache is the ideal scout for an infantry patrol, as he obtains all information without being seen, can conceal himself on a bare plain, and is good for thirty miles a day all the time."

While the Apache, habitually operating on foot, gives us a valuable lesson in the conduct of infantry patrols, the mounted Indian furnishes a similar one for the cavalry reconnoitering service.

The Sioux is, probably, the best type of mounted Indian. He is "all eyes and ears," is seldom seen, and may, in fact, be characterized as a perfect scout. When General Crook's command left Fort Fetterman, in the campaign of 1876, it had in its front from 8,000 to 10,000 hostile Sioux; and yet, in a march of 200 miles, not one of them was seen, though they kept the command under constant observation, and knew its every movement. At Tongue River the camp was fired into in broad daylight by Indians who had stealthily approached unseen to the opposite bank of the river. Had the stream been unfordable, so that the Indians could not have been dislodged, they would have made the camp untenable.

The advance guard and flankers of the Sioux are pushed miles beyond the main body, and their scouts hang upon the flanks of an approaching enemy. The scout gains some high point, where, lying on his belly in the shadow of some tree or rock, he sees everything without being seen himself; his horse meanwhile being either picketed or grazing with dragging lariat behind the crest of the hill. The expedients adopted for concealment are many and ingenious. The scout

sometimes crawls towards a rock on the crest of a hill, and when near it draws his blanket, or a white cloth or stable frock (according to the color of the rock) over his head and shoulders, covering everything but his eyes, and then wriggles himself by degrees up to the rock, where he remains motionless, until he has minutely scanned all the country in sight, when he withdraws as stealthily as he approached, whether anything has been discovered or not. He often conceals himself by holding a piece of sage-brush in front of him while lying down. Sometimes he fastens bushes to the upper part of his body, extending above his head; then, sitting in a "wash-out" or wallow, he is completely concealed, while his own view is unobstructed.

In long-distance reconnoitering, the scout (lying flat on his belly) places his elbows on the ground, rests his head on his hands, which are so placed as to shade his eyes and limit the front of vision, and then fixes his gaze upon some distant object, which he watches intently. In this way Bloody Knife, one of General Custer's scouts, located Sitting Bull's camp on the Little Big Horn at a distance of about twelve miles; discovering first the smoke, and then ponies grazing in the valley.

Buttes and other prominent points near the trail are sought as lookouts, the scouts often going miles to reach them, unless the enemy is known to be near. In almost every case, the scouts work in pairs, a watch being kept to the rear as well as to the front. Before crossing a ridge, the scouts invariably scan carefully the valley in front. They never enter any place without first reconnoitering it; and if it does not afford means of easy escape, they keep out. If they come to an unfordable stream, they swim it without any ado, and continue their reconnaissance.

The Sioux place their camp in hollows and valleys, where it is well concealed; the location chosen being always such

that numerous cañons or ravines provide means of escape. In the daytime watch is kept from the highest points; at late dusk and early dawn the scouts are drawn in so as to enable them to see an approaching enemy on the sky-line.

If attacked and forced to abandon their village, the Sioux retreat, by means of the ravines or other avenues, to the high ground; and in many cases a neglect on the part of the troops promptly to occupy surrounding heights has enabled the Indians to drive them out of the captured camp by fire from commanding positions.

On the battle-field the tactics of the Sioux is simple and effective. At the battle of Rosebud, on being discovered, they advanced so rapidly to the attack that the troops barely had time to prepare to receive them. On being dislodged from one height, the Indians retreated rapidly, and made a stubborn stand at the next. They fought in successive lines, one advancing when the other retreated; and when they were charged, they scattered only to unite and fight at some point beyond. Their ability to rally quickly often enables them to inflict a heavy blow upon troops disordered by pursuit.

In attacking, the Indians endeavor to surround, or, at least, to extend beyond their enemy, so as to bring upon him a convergent fire; their tactics, in this respect, as in many others, bearing a considerable resemblance to the *lava* of the Cossacks. The fact that their own line is thus thin and easily broken causes them no uneasiness; for their enemy's fire is divergent and directed against a difficult target; and if the line is broken, they scamper away, quickly rally at a signal, and resume the same tactics as before. The chief object of their tactics is to place themselves in such a position as to give them the most effective fire on the enemy, and, at the same time, to incur the least possible loss.

In order to mislead the enemy in regard to the movements of their "villages," or to gain time for the escape of their families or herds, they not infrequently uncover the trail and mass their warriors in another direction, making just enough resistance to draw the pursuing force away from the trail of their non-combatants.

Like the Apaches, the Sioux do not expect a night attack. They post no sentinels after dark, but are on the alert at the first sign of dawn. They do not, however, have so great an aversion to night operations as the Apaches; for parties of prowlers often approach camp, to steal horses, if the animals are on the "picket line," or to stampede them, if they are herded or lariatied. Night attacks by the Sioux are almost unknown; though a considerable force of warriors fired into the camp of Baker's battalion of the Second Cavalry at Pompey's Pillar, on the Yellowstone, in 1872.

The Sioux warrior also resembles the Apache in his knowledge of the country and its topography; in his expertness in trailing; in the many makeshifts of the practical warrior; and in his skillful interchange of signals with distant comrades.

It is not because of his courage, expertness with fire-arms, or celerity of movement that the Indian is a formidable foe—indeed, in the first two qualities he is greatly surpassed by our troops. He is formidable because his thorough knowledge of all the essential details of the science of security and information generally enables him to give battle when he chooses, and to avoid conflict when he sees fit. As a scout he is a model; and it may be said that the scouting methods prescribed by the best European authorities are valuable in proportion to the degree of their approach to those of the North American Indian.

It should be observed that these Indians are all trained

to war, and that their methods are not the result of the inspiration of the occasion, but of constant practice, and of a study which is not less deep because it is unlettered. Methods of scouting, various expedients of warfare, and even geographical details, are learned by one generation from another; and more than one instance has been known of an Indian finding his way without difficulty through a country which he was traversing for the first time, because he had learned so thoroughly from others the relative positions of prominent landmarks as to be in possession of a reliable mental map. Constant practice in hunting, stalking game, and making long journeys through wild country, makes the Indians expert in judging distances, reconnoitering, utilizing cover, and husbanding the strength of themselves and their horses. In fact, the Sioux quite as well as the Prussian, teaches the lesson that nothing but constant practice in the real or simulated conditions of war can properly prepare the soldier for the duties of a campaign.

APPENDIX I.

Advance Guard Drill—Infantry.

Often in active service a command is ordered on detached duty from a point some distance within the outposts of the army. It is unnecessary and fatiguing to march from the camp or bivouac with an advance guard, which should be thrown out only when the outpost line is passed. Troops should, therefore, be drilled in forming advance guard from column with celerity.

When a single company forms the advance guard, the first section constitutes the advance party, the second section the support, and the second platoon the reserve. The company being in column of fours, at a halt, the captain commands: 1. *Form advance guard*, 2. MARCH. At the first command, the first sergeant takes command of the first section, and the corporal of the first four exchanges places with his rear rank man. At the command *March*, the front rank of the first four, under the second sergeant, moves to the front as a point. The rear rank of the first and the front rank of the second four oblique to the left and right, respectively, to form flanking groups. The point and flankers all move out at double time, reducing their pace to quick time as soon as they reach their proper positions. The first sergeant detaches two men from the rear rank of the second four to march as connecting files between the advance party and the support, puts the other two in the line of file-closers, and commands: 1. *Forward*, 2. MARCH, the second command being given as soon as the point has gained its proper distance. When the section consists of only two fours, the first sergeant marches the

rear rank of the second four forward, and the connecting files are furnished by the support.

The first lieutenant (remaining with the second section) commands: 1. *Forward*, 2. MARCH, the second command being given as soon as the support has its proper distance. He then adds: 1. *Rear four*, 2. *Right and left oblique*, 3. *Double time*, 4. MARCH. The front rank of the rear four obliques to the right, and the rear rank to the left, at double time, forming the flankers of the support, and taking quick time on gaining their positions.

The captain (remaining with the second platoon) commands: 1. *Forward*, 2. MARCH, the second command being given as soon as the reserve has its proper distance. Should flankers be necessary for the reserve, they are then sent out, at double time, by the same commands as in the case of the support, from the rear (or rear and leading) fours. The entire advance guard marches at attention, the advance party and support marching on as broad a front as practicable, and the reserve in column of fours.

If the command is: 1. *Form advance guard*, 2. *Double time*, 3. MARCH, the point and flankers move out as already prescribed, but do not reduce their pace upon gaining their positions. The advance party, the support, and the reserve move forward successively at double time. The reserve takes quick time at the command of the captain, and the other parts of the advance guard then conform to the pace of the reserve.

If the company is left in front, the duties described above for the first lieutenant will be performed by the second lieutenant, and the point will be commanded by the third sergeant. In either case the first sergeant commands the section constituting the advance party.

When the advance guard consists of an entire battal-

ion, the first and second companies constitute the vanguard, and the third and fourth form the reserve. The vanguard is commanded by its senior captain. The major commands: 1. *Form advance guard*, 2. MARCH, the commands being repeated by the commander of the vanguard. The point and flankers move out from the first section of the leading company, the first platoon of this company constituting the advance party. The first sergeant does not take command of the first section. As soon as the point has gained its proper distance, the lieutenant commanding the first platoon moves it forward. As soon as the advance party has gained its proper distance, the commander of the vanguard commands: 1. *Forward*, 2. MARCH, immediately adding, 1. *Rear fours first and second companies*, 2. *Right and left oblique*, 3. *Double time*, 4. MARCH. The fours designated move out as flankers in the manner already prescribed, those of the first company being slightly in advance of, and those of the rear company slightly in rear of, the support. If only one group of flankers is needed on each flank, they are formed by the rear four of the first company. When the support has gained its proper distance, the major moves the reserve forward, and orders flankers out from the reserve, if necessary, in the same way as from the support.

In the case of two battalions forming the advance guard of a brigade, the major commanding the first battalion, upon receiving instructions from the commander of the advance guard, commands: 1. *Form advance guard*, 2. MARCH. The commands are repeated by the captain of the first company, who adds: 1. *Forward*, 2. MARCH, in time to move his entire company forward as advance party as soon as the point has gained its proper distance. The major commands: 1. *Forward*, 2. MARCH, the second command being given the moment the advance party has

gained the proper distance. The major then adds: 1. *Rear four* (such) *company or companies*, 2. *Right and left oblique*, 3. *Double time*, 4. MARCH, the flankers being taken from the second, fourth, or third company, or from all three in the order mentioned, according to the number of groups required on each flank. When the support has gained the proper distance, the major of the second battalion moves the reserve forward. The major commanding the reserve should ordinarily be the senior, as the commander of the advance guard is habitually with the reserve.

The terrain will not always lend itself readily to the normal formation of the advance guard. When the normal formation is impracticable, the commander will designate the different parts of the advance guard, will specify the number of flankers, etc., and will then give the command: 1. *Form advance guard*, 2. MARCH, which will be executed according to the preliminary instructions.

To assemble the advance guard, the reserve is halted, and the other parts of the advance guard at once halt. The command is then given: 1. *Assemble*, 2. MARCH, or the commander gives the signal of assembly as prescribed in the drill regulations. The command is repeated by the commander of the vanguard, and then by the commander of the advance party. At the command *March*, the point, flankers, and connecting files move on the shortest lines to the body from which they were sent out, and take their places in the column. The detached men having thus rejoined, the advance party marches back and joins the support, and the united bodies then march back and join the reserve. Should the advance party or support not be in column of fours, such column should be formed before its commander gives the order for assembling.

If it is desired to assemble on the advance party, the

command is: 1. *Assemble on the advance party*, 2. MARCH. The command is executed as prescribed above, except that the advance party remains halted, and the support and reserve move forward and close upon it.

The assembly may be similarly made on the support by the command: 1. *Assemble on the support*, 2. MARCH. In this case the assembly is made as prescribed above, except that the advance party marches back, and the reserve moves forward to join the support. In all cases the assembly may be made either at quick time or double time.

Rear Guard Drill.

Upon the receipt of the order to form a company as a rear guard, its captain halts it, and, if it be not already in that formation, forms it in column of fours facing the enemy. The main body having gained the proper distance, the captain commands: 1. *Form rear guard*, 2. *Second platoon fours left about*, 3. MARCH, and the second platoon, under command of the captain, at once moves to the rear and follows the main body. At the command, 1. *First and rear fours*, 2. *Right and left oblique*, 3. MARCH, the designated fours move out as flankers in the manner prescribed for the advance guard, the front rank to the right and the rear rank to the left.

When the reserve has gained its proper distance the first lieutenant commands: 1. *Second section*, 2. *Fours left about*, 3. MARCH. The section follows the reserve as a support, maintaining the proper distance. Flankers are sent out from the rear four as in the advance guard.

The support having gained its proper distance, the first sergeant commands: 1. *Form rear party*, 2. MARCH. At the first command the corporal of the first four exchanges places with his rear rank man, and at the command *March*,

the rear rank of the first four and the front rank of the second four face to the left and right respectively, leave the column at double time, and upon gaining the proper interval from the column, march to the rear at quick time. The front rank of the first four stands fast. Immediately after giving the command for forming rear party, the first sergeant commands: 1. *Fours left about*, 2. MARCH, and afterwards detaches two men as connecting files between the rear party and support. The front rank of the first four assumes the proper formation for a rear point, and marches to the rear as soon as the rear party has gained the proper distance.

Similar modifications will give suitable commands for larger bodies of infantry as rear guards. In the cavalry, at whatever pace the main body may be retiring, the whole rear guard is halted, and the successive fractions then follow at the gait of the main body.

As in the case of the advance guard, the terrain will rarely lend itself readily to the normal formation. It will accordingly generally be necessary for the commander to designate certain modifications before giving the command: 1. *Form rear guard*, 2. MARCH. The command will then be executed in accordance with the preliminary instructions. At the command: 1. *Assemble*, 2. MARCH, the rear party and support are assembled in the same manner as the advance party and support in an advance guard, and are marched forward to the reserve.

Advance Guard Drill—Cavalry.

The troop being in column of fours, the captain commands: 1. *Form advance guard*, 2. MARCH. At the first command, the commander of the first platoon takes command of the vanguard, and the guidon sergeant takes position abreast of the leading four of the reserve. At the

command *March*, the first four, under the command of the right principal guide, moves forward at a trot, constituting the point. The second and third fours oblique to the right and left, respectively, at a trot, until they are about 300 yards from the line of march, and then move forward until they are on a line about 100 yards in rear of the point, increasing their pace, if necessary, in moving forward to their position. The right principal guide is the commander of the advance party, and regulates the movements of the point and flanking groups.

When the point has gained a distance of 600 yards, the commander of the vanguard moves the support forward at a walk, and the advance party (consisting of the point and flanking groups) at once takes the same pace. The commander of the vanguard, as soon as he has put the support in motion, detaches two flanking groups from the last three fours. These patrols, which are always under a non-commissioned officer, march, one on each flank, about half a mile from the column and slightly in advance of the reserve. As one flank is generally more exposed than the other, the patrol on the dangerous flank would consist of eight and the other of four men. If both flanks appear to be equally exposed, each patrol should consist of six men, but it is not otherwise advisable to break up the unity of a four. These patrols move to their positions at a trot, and take such formation as circumstances may require.

When the support has advanced about 700 yards, the captain moves the reserve forward. When flanking groups are thrown out from the reserve, they should be taken from the rear fours.

If the command is: 1. *Form advance guard*, 2. *Trot*, 3. *MARCH*, the advance guard is formed as above described, except that the point and flankers move to their posi-

tions at a gallop, and the support and reserve move forward at a trot. As soon as the support moves forward, the advance party comes down to a trot. The entire advance guard continues to move at a trot until the pace of the reserve is either increased or reduced, when the other parts at once conform thereto. Unless orders be given to the contrary, the reserve always regulates the pace of the advance guard.

If the command is: 1. *Form advance guard*, 2. *Gallop*, 3. *MARCH*, the advance guard is formed as in the last case, except that the advance party continues the gallop and the other bodies move out successively at the same pace. The cavalry should be habitually drilled in forming advance guard at a gallop.

If the troop is left in front, the advance party is commanded by the left principal guide, and the vanguard by the corresponding platoon commander.

The above method of forming an advance guard will answer in the case of a troop of 60 men or more. If the troop numbers only 60 men, it should be divided into three platoons. If the troop is small, the point will be taken from the first four, and the flankers of the advance party may be reduced to two on each flank, both taken from the second four. The flanking patrols sent out from the support may be reduced to four men each. When the troop is very small, and (as is usually the case) the country is such that these patrols can not be dispensed with, it will not be able to furnish the entire advance guard, the whole strength being required for the advance party and support.

An advance guard consisting of more than one troop is formed by similar commands and means.

The assembly is executed as in the case of infantry. It may be made at a walk, trot, or gallop.

APPENDIX II.

Questions.

The following questions have been prepared with a view to their use in a general review of the book. The number in parentheses indicates the page on which the answer to the question is to be found.

1. How is the security of an army provided for on the march? (18.)
2. How, at a halt? (18.)
3. Why are the two elements of security and information inseparable? (18.)
4. The information necessary for a commander is of what two kinds? (18.)
5. How is the first kind of information generally obtained? (19.)
6. In what two ways is the second class of information gained? (20.)
7. By whom may a reconnaissance be effected? (21.)
8. To gain reliable information of the enemy, what should be done? (21.)

Advance Guards.

9. What would be the effect if troops moving in one body should come suddenly upon the enemy? (22.)
10. How is a column of troops on the march divided? (22.)
11. What, in general terms, are the objects of the advance guard? (22.)

12. What are the specific objects of the advance guard? (22.)

13. How does the proportionate strength of the advance guard vary? (23.)

14. What is the danger in having the advance guard too weak? (23.)

15. As a general rule, what portion of the entire force is assigned to the advance guard and to the rear guard on advance—and what on a retrograde movement? (23.)

16. Whence are the flanking parties taken? (23.)

17. With a small force, what may be the proportionate strength of the advance guard? (23.)

18. Why should the proportion be larger in the case of a large force? (23.)

19. What is the object of each of the constituent detachments of the advance guard? (24.)

20. Into what two parts is the advance guard primarily divided, and what is the strength of each? (27.)

21. Into what two parts is the vanguard divided, and what is their relative strength? (27.)

22. How are these proportions varied? (27.)

23. Draw a diagram representing the formation of a company of infantry as an advance guard. (Plate I.)

24. If the nature of the country is such as to render the use of flanking groups impracticable, what is done? (28.)

25. When marching in an open country, how may the advance guard be formed? (28.)

26. Draw a diagram representing a battalion of infantry as an advance guard. (Plate III.)

27. Describe briefly the formation of an advance guard consisting of two battalions. (31.)

28. What might result if the distance of the advance guard from the main body were too great; and what, if it were too small? (31.)

29. Give the "rough rule" which will answer in most cases for determining the distance of the advance guard from the main body. (31.)

30. When must this distance be decreased, and when may it be increased? (32.)

31. Where does the commander of the vanguard march? (35.)

32. Describe the duties of the commander of the vanguard. (35.)

33. How are losses in the advance party replaced? (36.)

34. In a command of considerable size, who is charged with the duties of selecting a camp or bivouac for the main body? (36.)

35. Where does the commander of the advance guard march? (36.)

36. What qualities does the commander of the advance guard need, and why? (36.)

37. What should the commander of the advance guard continually consider, and what, in general, should he do? (37.)

38. What is done when the advance guard halts? (37.)

39. How is information conveyed from one part of the advance guard to another? (37-38.)

40. Draw a diagram representing an advance guard consisting of a troop of cavalry. (Plate IV.)

41. Describe the composition of the advance party, the supports, and the reserve, when the advance guard consists of two troops. (41.)

42. What would be the composition of the advance party in a very large advance guard? (42.)

43. Why are the distances and intervals greater in a cavalry advance guard than in one composed of infantry? (42.)

44. Why should an advance guard be composed of all arms? (43.)

45. In the United States Army, what arm should, if in sufficient numbers, compose the support? (43.)

46. Describe the use of artillery with the advance guard, and its position therein when marching. (43-44.)

47. Describe the use and position of the engineers with the advance guard. (44-45.)

48. Upon what does the proportion of each arm with the advance guard depend, and when is each preferable? (45.)

49. As a rule, what troops perform the duty of advance guard, and when may it be desirable to compose the advance guard differently? (45.)

50. State the general and important rule in regard to the disposition of the advance guard, whether on active service or merely at drill. (46.)

51. Describe the method of action of the advance guard on meeting the enemy. (46-47.)

52. Describe the order of march of a division—advance guard, main body, and rear guard. (48-51-52-53.)

53. How would the front of an army corps on the march be protected? (53-54.)

54. In the case of a flank march near the enemy, in what respects does the flank guard resemble an advance guard, and how does it differ from it? (54-55.)

55. Describe the duties of the advance guard in a retreat. (55.)

Outposts.

56. What are outposts, and with what duties are they charged? (56.)

57. What effect on an outpost has a good cavalry screen in its front? (56-57.)

58. How may the duties of an outpost be classified? (57.)

59. Into what four parts is an outpost divided? (58.)

60. Who occupy the line of observation; and who, the line of resistance? (58.)

61. What are the normal distances between the subdivisions of an outpost of infantry?—of cavalry? (58.)

62. To what may the general plan of an outpost be likened? (58.)

63. What portion of the strength of the outpost is generally assigned to the reserve, to the supports, and to the pickets? (61.)

64. On what does the strength of a picket depend, and what principle regulates the strength of each support? (61.)

65. What two systems of outposts are there, and what are their general characteristics? (61.)

66. State the requirements of a good outpost position. (61.)

67. State what furnishes one of the best; and what, one of the worst, outpost positions. (61.)

68. What should be done when the outpost is compelled to occupy a wood, the farther edge of which is too distant to be occupied? (62.)

69. If the outpost be not compelled to occupy the wood, in this case, what is generally advisable? (62.)

70. Where a stream, canal, or other obstacle having but few passages, lies parallel to the outpost line, what may be done? (62-63.)

71. What should generally be the shape of the outpost line? (63.)

72. On what does the strength of the outpost depend? (63.)

73. As a rule, what is the maximum strength of the outpost in proportion to the entire command? (64.)

74. When the army is marching, from day to day, what constitutes the outpost at each halt? (64.)

75. If outposts are required on the flanks and rear, of what are they composed? (64.)

76. Draw a diagram representing an outpost consisting of a regiment of infantry. (Plate VI.)

77. Draw a diagram representing an outpost consisting of a squadron of cavalry. (Plate VII.)

78. State how the outposts for divisions and brigades are generally furnished, and give the alternative formations of a brigade outpost. (64-67.)

79. What provisions for the command of the outpost are made in this case? (67.)

80. If two brigades encamp in the first line, with the third in reserve, whence are the outposts taken? (67.)

81. Where is the baggage of the outpost troops kept? (67.)

82. State when infantry is preferable to cavalry for outpost duty, and the reverse, and state how the two arms may be advantageously combined. (67-68.)

83. How should artillery be used with an outpost? (69-70.)

84. State the considerations on which the distance of the outpost from the main body depends. (70-71.)

85. What is the usual distance, and what is the maximum distance? (71.)

86. How is the outpost divided, and where are the several headquarters? (71.)

87. What instructions does the outpost commander receive from the commander of the forces, and what does he (the outpost commander) then do?—including his instructions to his subordinates. (71-72.)

88. As a rule, how should the outpost be intrenched? (73.)

89. How are sentinels generally posted, and how may the group system be used? (73.)

90. State the requirements of a good post for a sentinel. (74.)

91. How far apart may sentinels and vedettes be?—minimum and maximum distances. (74.)

92. What are the general duties of a sentinel, and what should he clearly understand? (74-75.)

93. What persons are allowed to cross the line of sentinels, and what is done with the others? (75.)

94. How are deserters from the enemy received at the outpost? (75.)

95. When a flag of truce approaches, how is the bearer received by the sentinel? (76.)

96. Everything observed by the sentinel is how communicated? (76.)

97. What are the general rules in regard to sentinels firing? (76.)

98. How often should sentinels be relieved? (77.)

99. How are vedettes posted? (78.)

100. How may vedettes sometimes perform their duty dismounted? (78.)

101. What is a connecting sentinel? (78.)

102. What is a picket sentinel? (78.)

103. What is the object of an examining post, and of what persons does it consist? (78-79.)

104. How is a person approaching an examining post received? (79.)

105. If a person approaches the line of sentinels at any other point than the examining post, what is done? (79.)

106. What are the objections to examining posts, and when may such posts be advantageously used? (79.)

107. What are detached posts? (80.)

108. What points may be advantageously held by detached posts? (80.)

109. How often are detached posts relieved, and what is required of the men composing them? (80.)

110. What is the usual strength of a picket?—both infantry and cavalry. (80.)

111. How many double sentinels or vedettes does a picket usually furnish? (80.)

112. What regulates the strength of a picket, and what portion of the picket is used in patrolling? (80-81.)

113. What are the maximum and minimum fronts of an infantry picket? (81.)

114. What are the maximum and minimum fronts of a cavalry picket? (81.)

115. Pickets are generally about how far apart? (81.)

116. What line is the first consideration in selecting the ground for the outpost? (82.)

117. What are the six requirements of a perfect picket post? (82.)

118. If a picket is posted in a defile, what should be done? (82.)

119. What is the general rule in regard to posting a picket in a house or inclosure; and what exception is there to the rule? (82.)

120. How should the picket be situated relatively to a junction of roads leading from the enemy's position? (83.)

121. When an impassable obstacle lies along a portion of the front of the outpost, what may be done? (83.)

122. What are the general rules concerning fires with the picket? (83.)

123. What is required of the men composing the picket?—both infantry and cavalry. (83-84.)

124. What should be done if a noise is heard from a neighboring picket? (83.)

125. What do the supports constitute? (84.)

126. What regulates the position of the supports, and what should be its general requirements? (84.)

127. What arrangements should the commander of a support make with a view to defense? (84-85.)

128. What is required of the men composing the support? (85.)

129. Describe a Cossack post. (85-86.)

130. What are the disadvantages and advantages of Cossack posts? (86.)

131. What does the reserve constitute, and of what does it generally consist? (89.)

132. What considerations influence the selection of its position? (89.)

133. What rules obtain in regard to the men and horses of the reserve? (90.)

134. When may the reserve be dispensed with? (90.)

135. What is the advantage of the omission of the reserve, and why can it but rarely be omitted? (90.)

136. What is the objection to retaining the cordon system at night? (90-91.)

137. What system is generally adopted, in its essential features, at night; and on what is it based? (91.)

138. Give the important details of the outpost system at night. (91-92.)

139. In cavalry outposts, where are the pickets posted at night, and what precautions are taken? (92.)

140. When the enemy is close at hand and aggressive, what may sometimes be advisable? (92.)

141. When are the changes in the position of the outpost arranged and made? (92.)

142. What change is made in the positions of the sentinels for night? (92.)

143. Describe the composition and duties of a visiting patrol. (94.)

144. When are visiting patrols mainly used; what extent of front do they cover; and how far to the front do they go? (94-97.)

145. What is the object of reconnoitering patrols? (97.)

146. What is the size of reconnoitering patrols, and how far do they go beyond the line of sentinels? (97.)

147. What patrols should be used at night, and what must be constantly varied in regard to them? (97.)

148. When is the duty of a reconnoitering patrol best performed? (97.)

149. What are patrolling posts? (98.)

150. Describe the manner in which a patrolling post performs its duties. (98.)

151. If the number of patrolling posts is such as to weaken the picket materially, what must be done? (98.)

152. From what part of the outpost are strong patrols taken, and how do they vary in size? (99.)

153. How far from the line of sentinels may a strong patrol advance, and how may it sometimes be used? (99.)

154. With what should the men detailed for outpost duty be supplied? (100.)

155. What should each officer detailed for outpost duty have?—each non-commissioned officer? (100.)

156. Describe the posting of the outpost, both infantry and cavalry. (100-101.)

157. After the picket is posted, what does its commander do? (102.)

158. When, at the close of the day's march, the advance guard forms the outpost, what portions of it constitute the various parts of the outpost? (103.)

159. Whenever practicable, what should be done to make an equitable division of sentinel duty? (103.)

160. Describe the defense of an outpost. (104.)

161. If the enemy is repulsed, by whom, and to what extent, is pursuit made? (104.)

162. Soon after the repulse of the attack, what should be done? (104.)

163. When knowledge of the enemy's approach is gained in time to admit of full preparation, how should he be received, and why? (105.)

164. When should the pickets be under arms, and why? (105.)

165. When is the outpost relieved, and why at this time? (105.)

166. Describe the manner of relieving the outpost. (105-106.)

167. How often are outposts relieved? (106.)

168. If the army is on the march, when is the outpost relieved? (106.)

169. If the army is retreating, what does the outpost form? (106.)

Reconnaissance.

170. Under what three heads may reconnaissance be considered? (107.)

171. By whose order, and how, is a reconnaissance in force made? (107-108.)

172. How should information be sought from the prisoners captured? (108.)

173. What arms are especially valuable in a reconnaissance in force, and why? (108.)

174. What are the advantages and disadvantages of making a reconnaissance in force in the evening; and what, in the morning? (108-109.)

175. To what three serious objections is a reconnaissance in force open? (109.)

176. What is a special reconnaissance? (110-111.)

177. How is an attempt upon a hostile picket carried out? (112.)

178. How may a force employed on a special reconnaissance vary in size? (113.)

179. How are patrols primarily divided, and how does each vary in size? (113.)

180. Patrols are also classified as what kinds?—State briefly the duties of each. (114-116.)

181. State what should be reported by an exploring patrol in regard to the following: Roads, railroads, bridges, rivers, woods, canals, telegraphs, villages, defiles, ponds and marshes, springs and rivulets, valleys, heights. (114-115-116.)

182. What arm is generally best suited to patrolling; and why is the union of infantry and cavalry on this duty undesirable? (117.)

183. What is the composition of a small infantry patrol? (117.)

184. Describe the preparation and inspection of a small infantry patrol, and describe the signals used. (117-118.)

185. Every patrol should have what general formation? (119-120.)

186. What is the only definite rule that can be laid down for the formation of a patrol? (120.)

187. What considerations influence the distances and intervals between the members of a patrol, and what are generally the minimum and maximum distances? (120.)

188. Of what should the point generally consist; how are the signals to and from the commander transmitted; and how is the patrol assembled? (120-123.)

189. Describe briefly how the patrol moves, and how it returns. (123.)

190. What should the patrol do in regard to great roads? (123-124.)

191. What is the general rule in regard to a patrol halting? (124.)

192. If another patrol of the same army or any friendly force is met, what should be done? (124.)

193. What should be done if a hostile patrol is discovered? (125.)

194. What should be done if the patrol falls into an ambushade, and what if a hostile sentinel or patrol is suddenly encountered in the dark? (125.)

195. What questions should be asked of civilians coming from the direction of the enemy, or whose neighborhood has been visited by hostile troops? (126.)

196. What should be done in regard to rumors among the inhabitants of important movements by the enemy? (127.)

197. What should be done in regard to people going in the direction of the enemy? (128-129.)

198. Give the general rules in regard to the selection and treatment of guides. (129.)

199. Describe the manner of reconnoitering cross-roads, heights, defiles, bridges, and fords. (129-130-131.)

200. Describe the manner of reconnoitering woods, inclosures, and houses. (131.)

201. Describe the manner of reconnoitering villages, cities, and towns. (132-133.)

202. If the patrol is strong enough, what places in a village or city should it seize? (132.)

203. What information may a patrol often gain from private letters? (132.)

204. Describe the reconnaissance of the enemy in position. (133-134.)

205. Describe the reconnaissance of the enemy on the march. (134-135.)

206. What indications are furnished by boats and bridges in the vicinity of the enemy? (135.)

207. What indications are furnished by the flames and smoke of the enemy's camp-fires? (136.)

208. What indications may be noted of the arrival and departure of troops? (136.)

209. What indications are furnished by the whistling of locomotives, the hurraing of troops, and the noise of explosions? (136.)

210. Describe the noise made by troops on the march, and the distance at which the various arms can be heard. (137.)

211. What indications are furnished by the reflection from the weapons of marching troops? (137.)

212. State the distances at which various objects

should be seen, on a clear day, by a man with good vision. (138.)

213. State some of the conditions which cause an object to appear farther or nearer than it really is. (138.)

214. What information may be gained from the trail of the enemy? (138-139.)

215. What indications are furnished by an abandoned camp or bivouac? (139.)

216. What inferences may be drawn from the manner and bearing of the inhabitants in a hostile country? (140.)

217. When should reports be sent in, and what should be reported? (140.)

218. How should a verbal report be sent, and when are such reports better than written ones? (140-141.)

219. What are the indispensable qualities of a written report? (141.)

220. As a rule, what is the general nature of the formation of a strong infantry patrol? (143.)

221. How do the operations of an expeditionary patrol generally differ from a special reconnaissance? (143-144.)

222. In general, how does an expeditionary patrol effect the capture of a sentinel?—of a patrol?—of prisoners generally? (144.)

223. When is the most favorable moment for questioning prisoners, and why? (145.)

224. What is the relative value of different grades of prisoners? (145.)

225. If enlisted men are captured, what should they be questioned about? (146.)

226. When the object is the destruction of roads, railroads, or telegraphs, or the tapping of a telegraph, how should the expeditionary patrol act? (146.)

227. When may harassing patrols be used, and what is their general method of operating? (147.)

228. Describe the nature and duties of flank patrols. (148-149.)

229. When may flank patrols be called covering patrols? (149.)

230. Describe the manner in which an advance guard passes through a town. (149-150.)

231. What are the essential differences between a cavalry and an infantry patrol? (154.)

232. What cavalry soldiers should be selected for patrol duty, and what is required in their inspection? (154.)

233. What general rule may be prescribed for the formation of a cavalry patrol, and how do the members of the patrol carry their firearms? (154-155.)

234. How do the signals of a cavalry patrol differ from those of an infantry patrol, and what additional signals may be used on open ground? (155.)

235. How does a cavalry patrol conduct itself at night? (155-156.)

236. Why must a cavalry patrol move along turnpikes and good roads, and what precautions should it take? (156.)

237. Why should the patrol commander adhere to the road selected? (156.)

238. In what details of the reconnaissance of different kinds of ground do the operations of a cavalry patrol differ from those of an infantry patrol? (157.)

239. If necessary to halt to feed or water, what places should be avoided, and what selected? (158.)

240. Of what are connecting patrols always composed, and how do they operate? (159.)

241. Describe the composition and duties of pursuing patrols. (160.)

242. Why can cyclist patrols operate, on a favorable terrain, more effectively than patrols composed of infantry or cavalry? (160.)

243. What is the usual elevation of a captive balloon, and what can be observed from that height? (162.)

244. To what height can a captive balloon easily ascend, and at what height is it safe from hostile fire? (162.)

245. What objection has been urged to the use of balloons on reconnaissance, why is this objection not a serious one, and what is the compensating advantage? (163.)

The Cavalry Screen.

246. What may the cavalry screen be said to constitute? (166.)

247. By what cavalry may the screening duty be performed, and which system would probably be adopted in the United States service? (166.)

248. On what does the distance of the screen from the main army depend? (167.)

249. How does the distance of the screen from the army change from the time the armies begin to concentrate until tactical operations begin? (168.)

250. What are the two great objects of the cavalry screen? (168.)

251. On what does the front of the screen depend, and what is the first consideration influencing it? (168-169.)

252. What would be the average front of an American cavalry brigade in screening and reconnoitering? (169.)

253. Draw a diagram representing an American cavalry brigade on screening and reconnoitering duty. (170-171.)

254. How may this formation be varied, if the enemy is at a distance, or lacking in aggressiveness; and how, if he is close and enterprising? (171.)

255. On what will the number of contact troops and the intervals between them depend? (171.)

256. How much artillery should be attached to the brigade, and what would be its position under different circumstances? (172.)

257. When the brigade is marching on two parallel roads, where is the reserve? (172.)

258. When the brigade is forced to march on a single road, what dispositions are made? (172-173.)

259. When the ground permits, and no serious engagement is expected within the next twenty-four hours, what formation may be adopted? (175.)

260. What rear guard is provided? (175.)

261. Describe the formation of the cavalry screen, based upon the experience of the War of Secession. (176.)

262. Why should the patrols sent out from the screening force generally be small; and what is the general rule for the size of a detachment? (179.)

263. From what bodies are the scouting patrols taken, and about how many are usually employed? (180.)

264. Describe Bonie's "points." (180.)

265. How far out are patrols and detached scouts sent, and of what should a patrol always keep informed? (180.)

266. In the movements of the patrols, to what is everything subordinated, and how do the patrols accordingly act? (181.)

267. As a rule, what patrols are detailed for each of the main routes, and the flanks, and to whom are the lesser roads intrusted? (182.)

268. When should a patrol sent out on a special mission return? (183.)

269. What precautions should the members of a patrol take in regard to papers on their persons? (183.)

270. For what duty are officers' patrols especially valuable; and in entering a village or town what should they do? (183.)

271. As a rule, the patrols, if driven in, will do what? (184.)

272. Why must the duties of information be separated from those of security in the case of a cavalry screen, and how is this separation usually effected? (185.)

273. To whom is the information gained by the cavalry screen transmitted? (185.)

274. On gaining contact with the enemy, what is the first consideration, and what should be done? (186.)

275. If the contact troops find themselves in the presence of large hostile bodies, advancing or deployed for battle, what should be done? (186-187.)

276. Concentration effected, what should be done under different circumstances? (187.)

277. Why should good cavalry never be surprised by a serious attempt of the enemy to break through the screen? (187.)

278. If the cavalry is driven in by the enemy, on what does the direction of its retreat depend? (188.)

279. How may the cavalry screen sometimes find it necessary to act as a veritable advance guard? (188.)

280. In combating the opposing cavalry screen, when should the saber, and when the carbine, be used? (188.)

281. Why must cavalry always be ready for effective fire action? (188.)

282. What effect on the infantry has a good covering screen of cavalry? (189-190.)

283. How may the advanced cavalry be used to seize important points; and in this use, what are the prime considerations? (190.)

284. Describe how the advanced cavalry furnishes and covers foraging parties. (191.)

285. What determines the number of connecting posts, and of what does each generally consist? (192.)

286. What changes are made in the strength and location of connecting posts in a dangerous country? (192.)

287. How are dispatches received at, and forwarded from, a connecting post? (192-193.)

288. When will connecting posts generally be found practicable, and what bodies must never establish them? (194.)

289. Describe the formation of a regiment of cavalry as a screening force. (195.)

290. Describe the alternative formation when a strong reserve is desirable. (195.)

291. Give a summary of the general rules for the conduct of a cavalry screen. (196.)

Rear Guards.

292. How is the withdrawal of a defeated army covered on the field of battle, and when does the duty of the rear guard begin? (198.)

293. Why is it that a retreating army can be protected by a fraction of itself? (198.)

294. Why must a rear guard be organized as soon as possible? (198.)

295. By what must the rear guard profit, and what two courses of action are then open to the enemy's choice? (198-199.)

296. State the strength of the rear guard under various conditions, and the objections to having it too large or too small. (200.)

297. What troops should be selected for the rear guard, and what should be done to raise their morale? (200-201.)

298. When, and how, should offensive returns be made? (201.)

299. What qualities should be possessed by the commander of the rear guard, and (briefly) how should he conduct its operations? (202.)

300. In general terms, what is the distance of the main body from the rear guard; and what are the objections to having it too great or too small? (202.)

301. Describe the formation of the rear guard. (203.)

302. Of what arms should the rear guard be composed? (203.)

303. How many guns should there be with the rear guard, and what may their effective use do? (203.)

304. How should the artillery of the rear guard be used, and what should be done if it becomes necessary to abandon the guns? (203-204.)

305. How should cavalry be used with the rear guard? (204.)

306. How are the several arms arranged in a rear guard composed of all arms? (205.)

307. What should be done with the baggage of the rear guard? (205.)

308. Draw a diagram representing a company of infantry as a rear guard. (207.)

309. Draw a diagram representing a troop of cavalry as a rear guard. (209.)

310. Describe the withdrawal of the rear guard from action. (206.)

311. What precautions should be taken to insure the right road being followed by the rear guard? (206.)

312. Why must the flanks of a rear guard be guarded with especial care, and what provision is made for protecting them from surprise? (206-207.)

313. If the two armies are of approximately equal strength, why should the rear guard have, at first, an advantage over the opposing advance guard; and why does not this advantage continue? (211.)

314. In regard to what is the pursuing army always in doubt? (211.)

315. What advantage has the rear guard over the pursuing force in regard to the ground? (212.)

316. What topographical features afford good positions for the rear guard; and on what will the amount of resistance at each stand depend? (212.)

317. To what extent should the commander-in-chief supervise the operations of the rear guard? (212.)

318. What are the advantages and disadvantages of having an intermediate body between the main body and the rear guard? (213.)

319. Why must contact with the pursuing force be preserved? (214.)

320. If the pursuit seems to slacken or cease, how is contact maintained, and what will often be necessary to ascertain the nature of the pursuit? (215.)

321. Why do defiles offer good opportunities to an energetic pursuer and to an able rear-guard commander? (215.)

322. How may a defile be defended at the entrance?
(215.)
323. How may a defile be defended at the outlet? (216.)
324. What measures of the rear guard may be classified as positive; and what, as negative? (216.)
325. Describe some of the most important negative measures that may be taken. (217.)
326. What should be done with stragglers, and with the sick and wounded, with the rear guard? (218.)
327. At each halt, what is done by the rear guard?
(219.)
328. How is the rear guard relieved when practicable?
(219.)
329. When an army is retreating by several parallel roads, how are the rear guards formed and commanded?
(219.)
330. If retreating by a single road, when may secondary rear guards be of use? (220.)
331. When the line of retreat is changed, what may be done with the rear guard? (220.)
332. How may a rear guard be used in a retrograde movement which is not a retreat? (220.)
333. In what respects are the duties of a rear guard easier in a friendly than in a hostile country? (221.)
334. Describe the duties of the rear guard in a forward march. (221-222.)

Spies.

335. Into what two classes may spies be primarily divided, and what may often be the characteristics of each?
(223.)
336. When are the services of spies most valuable?
(224.)

337. From what people should spies be selected? (224.)
338. What qualities should a spy possess, and how should he be tested if practicable? (225.)
339. How may compulsory spies be used in certain extraordinary cases? (225-226.)
340. What are double spies; what precautions should be taken against them; how may they be punished; and how may they be utilized? (226-227.)
341. What precautions should be taken in regard to messages intrusted to a spy? (227.)
342. How may a check be kept on one spy by the employment of others? (228.)
343. How should a spy be conducted from camp, how should he be received when he comes in, and how should he be treated? (228-229.)
344. State the questions of general application to which spies should be required to find answers. (229.)
345. What measures may be taken to establish the identity of a spy? (230.)
346. How may spies remaining in a certain locality convey information? (230.)
347. When the presence of the enemy's spies is suspected, what should be done? (231.)
348. What people should be especial objects of suspicion in a camp or bivouac? (231-232.)
349. How may a spy often be detected? (232.)
350. When a spy is captured, how should he be searched? (232.)
351. What qualifications are requisite for the management of the secret service of an army? (232.)

Newspapers.

352. Under what conditions only should a correspondent be allowed to accompany an army? (233.)

353. What are the duties of a press censor? (233.)

354. How may correspondents sometimes be utilized to lead the enemy into error? (235.)

355. When a newspaper has incurred the displeasure of the commander by the nature of its correspondence, upon whom should the punishment fall? (235.)

Orientation and Map-Reading.

356. What is orientation? (236.)

357. Describe the method of orientation by means of the compass. (236.)

358. Describe the methods of orientation by means of observation of the sun. (236-237.)

359. How are the points of the compass indicated by the moon in the different quarters? (238.)

360. Describe how an observer could orient himself by means of the North Star. (239.)

361. Describe the method of orientation by map. (239.)

362. Describe the means of orientation by indications. (239-240.)

363. Describe how practice in map-reading may be obtained. (240.)

Indian Scouting.

364. Describe the ordinary methods of an Apache company in the field against hostile Indians. (242-243.)

365. How far out do the Sioux push their advance guard and flankers, and what do the scouts do? (244.)

366. Describe some of the expedients adopted by Sioux scouts to obtain concealment. (244-245.)

367. How does the Sioux scout execute long-distance reconnoitering? (245.)

368. What places do the Indian scouts seek as look-outs, and what are their methods in regard to ridges, enclosed places, etc.? (245.)

369. Where do the Sioux place their camps, and what do they do if attacked and driven out? (245-246.)

370. Describe the tactics of the Sioux. (246.)

Advance Guard Drill.

371. Describe the commands and movements by which a company of infantry is formed as an advance guard. (249-250.)

372. Describe the commands and movements by which a battalion of infantry is formed as an advance guard. (251.)

373. Describe the commands and movements by which two battalions of infantry are formed as an advance guard. (251-252.)

374. Describe the commands and movements by which an advance guard of infantry is assembled. (252.)

375. How is a rear guard formed? (253.)

376. Describe the commands and movements by which a troop of cavalry is formed as an advance guard. (254-255-256.)

377. How is an advance guard of cavalry assembled? (256.)

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ARTHUR L. WAGNER,

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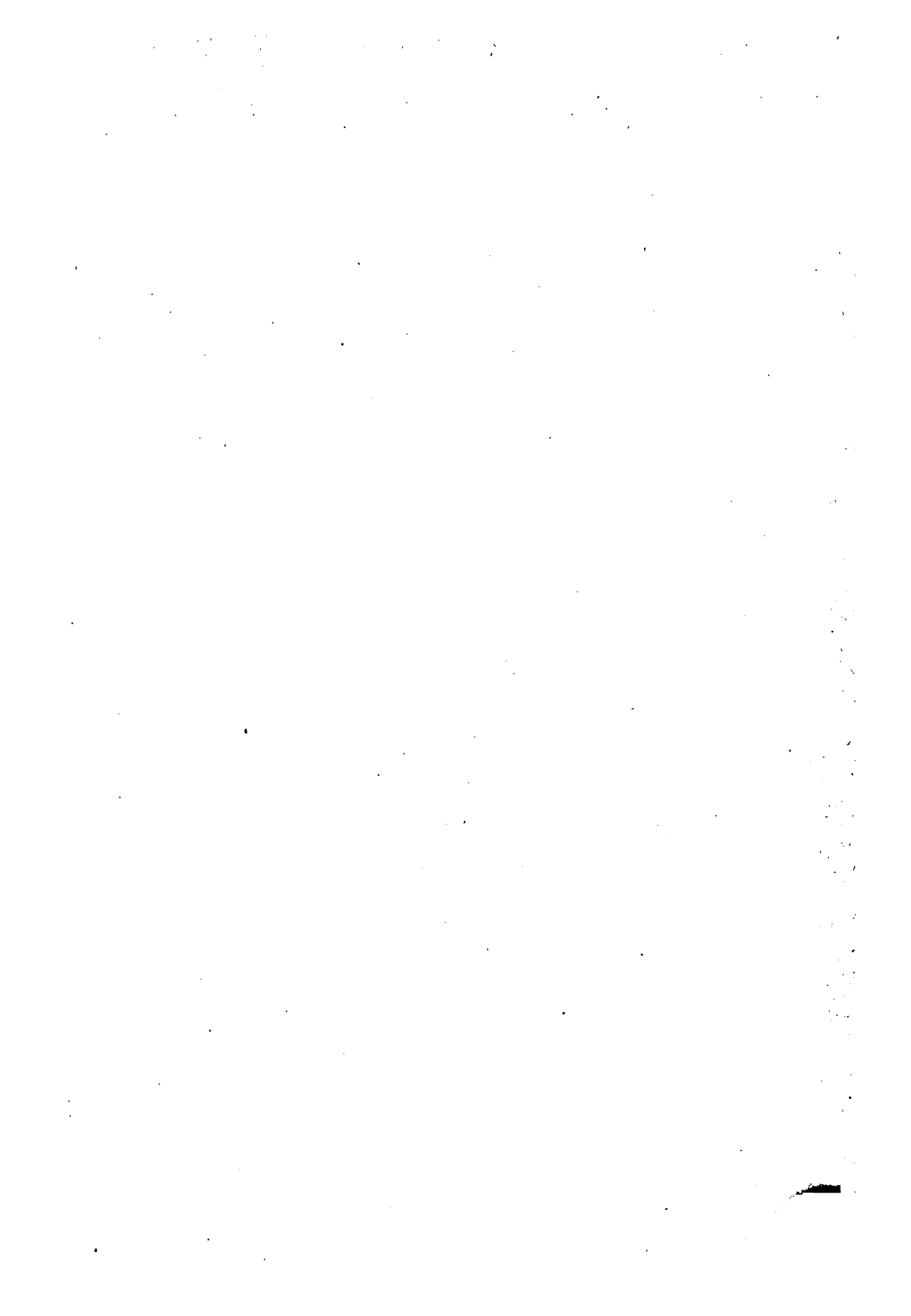
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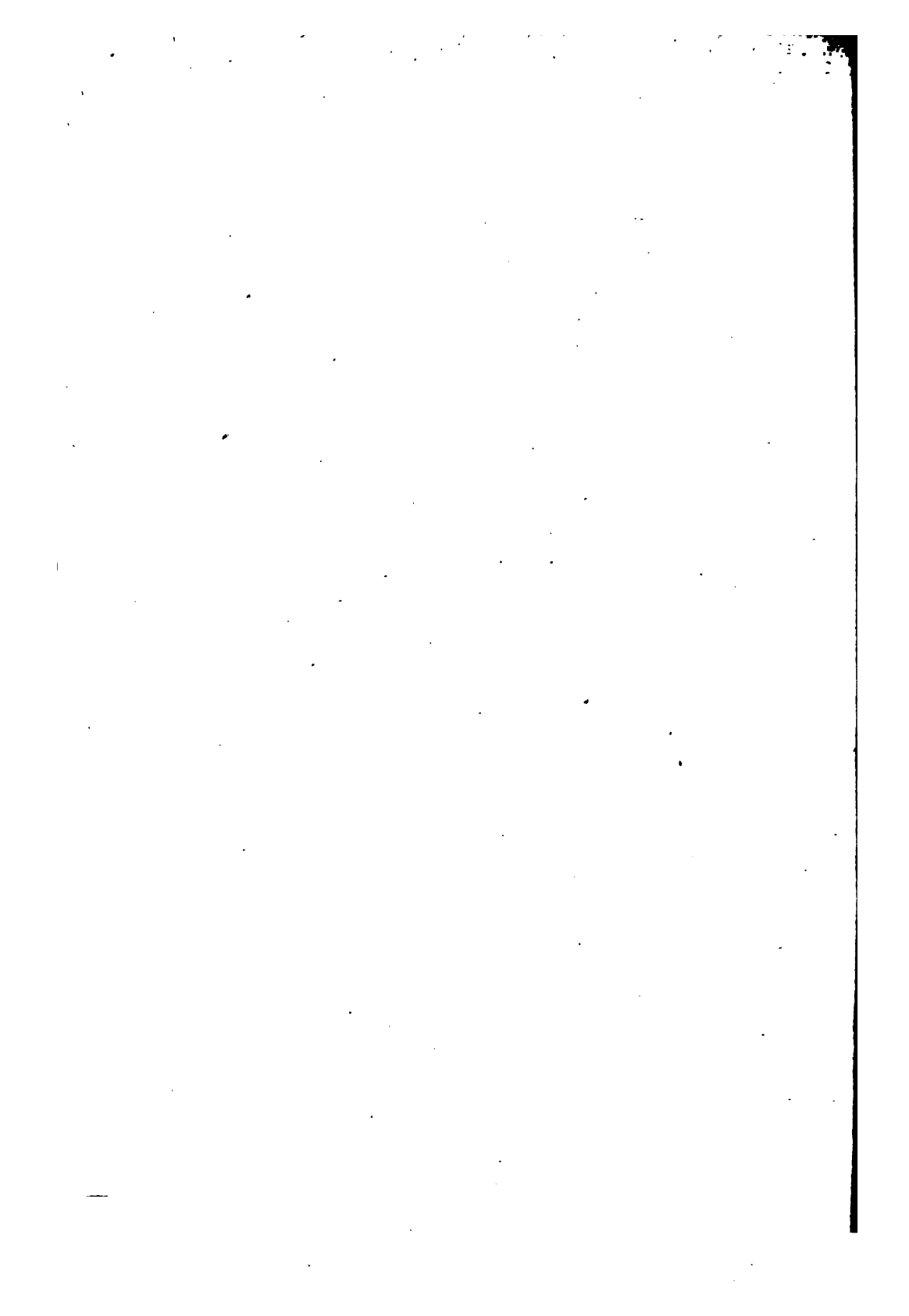
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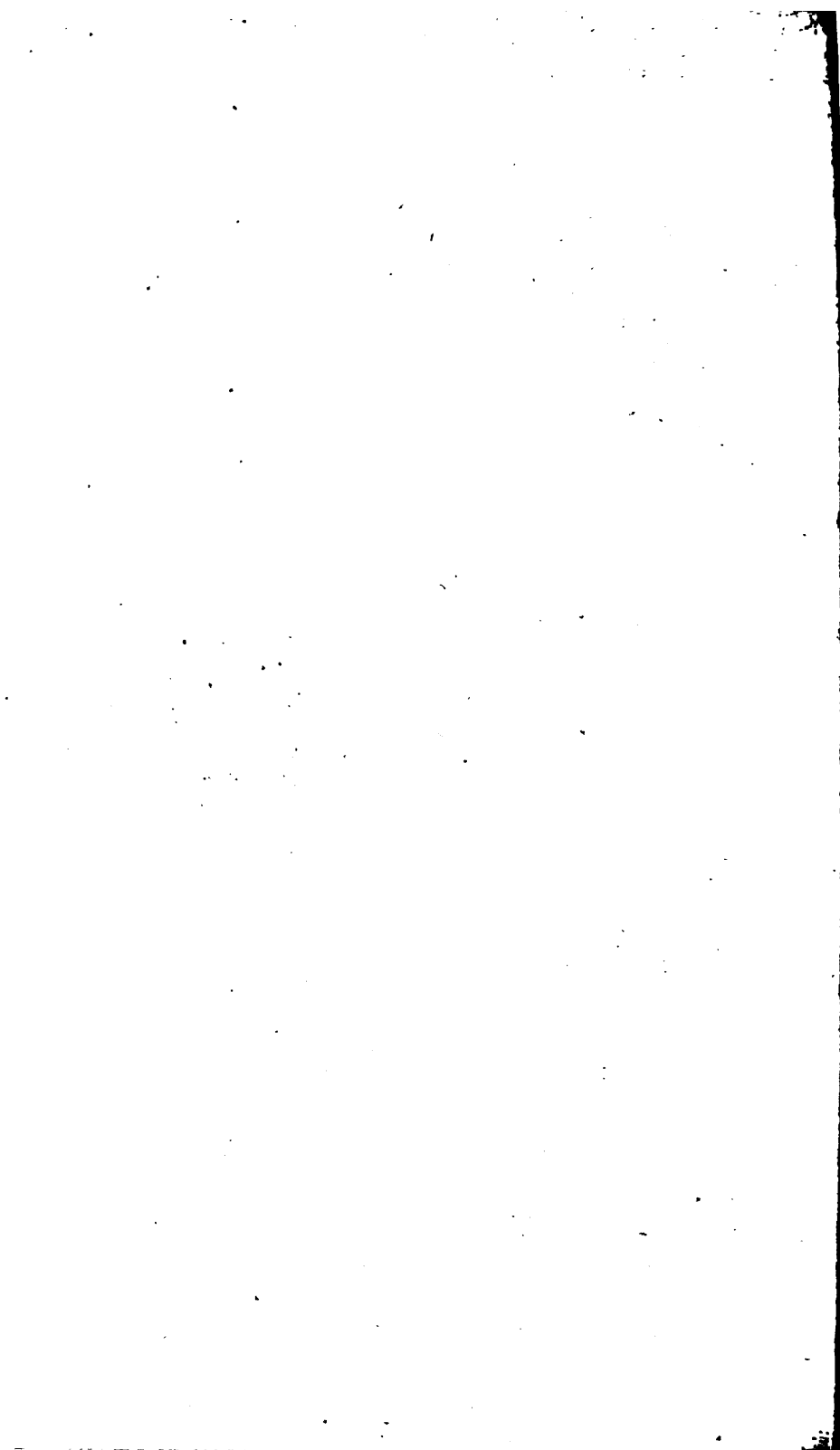
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